

Manufacturers Record

Industry Construction

Reg. U. S. Pat. Office



BALTIMORE, MD.

SEPTEMBER 10, 1931

\$492,000,000 Southern Contracts Awarded So Far in 1931

A gratifying factor in the present business situation is the continued activity in construction and in engineering developments in the Southern States. While the aggregate valuation of construction awards is not up to the records established in 1929, and in 1930 when the \$250,000,000 expansion of oil and gas pipe-lines swelled the total, it is a substantial figure, and represents a larger variety of miscellaneous work.

For the eight months ending August 31, contracts awarded in the South for building, construction and engineering projects amounted to more than \$492,000,000. During the depression of 1921, similar awards in the South for the same eight-months period aggregated \$184,000,000, or far less than half the total for this year. In the first eight months of 1922, after business had started upward, contracts awarded in the South reached \$367,000,000 which is about three-fourths the total of contracts let since January 1, 1931. Considering the lower cost of building, the dollar value of new work reported represents a greater number of projects than in 1929. This is due to the large number of public works contracts let.

Industrial building, expansion and improvements, the erection of plants, the installation of new equipment and machinery have marked Southern construction activity in recent weeks. It is an indication that the South continues to enlarge its industrial capacity and through modernization of existing plants far-seeing management keeps operating costs at a minimum.

Manufacturers who are taking advantage of present opportunities to bring their equipment up-to-date not only can do so at less expense, because of the lower prices prevailing, but will be prepared to more efficiently meet competition and secure a larger share of business as demand quickens.

WABCO

Packing Cups

for Pneumatic Devices

Here is a line of composition packing cups suitable for a wide variety of pneumatic devices, including operating valves, power and cushioning cylinders, hoists, chucks, clamps, air springs, etc. . . . They are made of the same composition developed in our own rubber products plant for use in railway air brake cylinders—it having proved under long practical tests to have better mechanical and physical properties than any other commonly-used packing material.

These cups will withstand the action of oil, moisture, and a wide range of temperatures. They are moulded to accurate size and shape, and re-enforced with open mesh cord fabric that is thoroughly imbedded in the composition.

WABCO packing cups are distinctively effective in making and holding an air tight seal.

WESTINGHOUSE TRACTION BRAKE CO.

Industrial Division

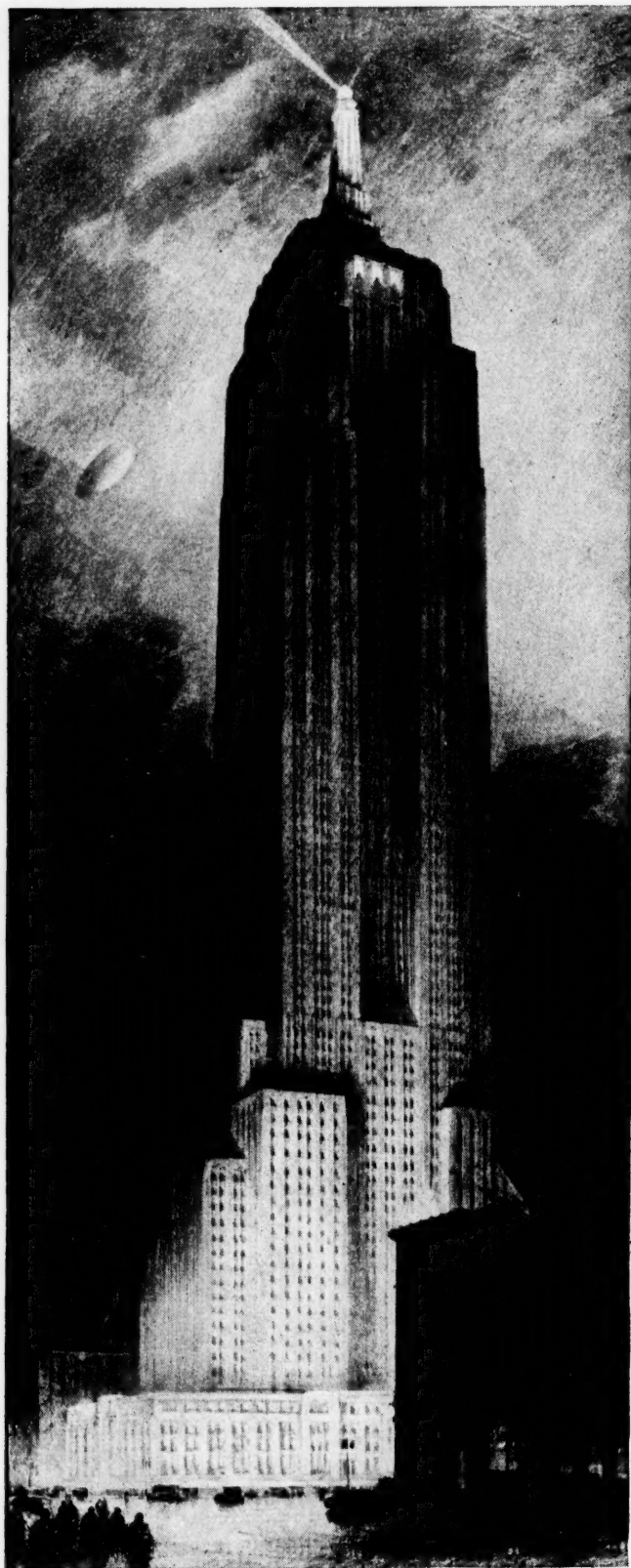
:::

PITTSBURGH, PA.

WABCO cups are available in a multitude of sizes, ranging from 1" to 26" diameter . . . Perhaps there is one among these that you can use . . . Send your drawings and permit us to quote on your requirements.



Entered as second-class matter at the Postoffice, Baltimore, Md., under the act of March 3, 1879. Vol. C, No. 11, weekly.



Constructed in 1930

SHREVE, LAMB & HARMON
Architects

H. G. BALCOM
Structural Engineer

EMPIRE STATE BUILDING

New York City

THE TALLEST BUILDING IN THE WORLD

This structure is on plot of 200 feet by 425 feet. Height from sidewalk to main roof 1050 feet,—85 stories,—Plus observation tower of 200 feet, making total height of 1250 feet.

Fabricated Structural Steel
furnished by

AMERICAN BRIDGE COMPANY

Subsidiary of United States Steel Corporation

Manufacturers of
STEEL STRUCTURES
of all classes
particularly

BRIDGES and BUILDINGS

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Contracting Offices

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St. Louis	Boston	Cleveland	Denver	Baltimore
Cincinnati		Duluth	Minneapolis	



Pacific Coast Distributor

Columbia Steel Company, San Francisco, Calif.

Export Distributor

United States Steel Products Co., 30 Church St., New York, N. Y.

THE TALL TREE HAS
A STRONG TRUNK—
OTHERWISE IT WOULD
NOT GROW TO BE
TALL

Top: Telephone Building, Atlanta, Ga. Marye, Alger & Vinour, Archts., W. C. Spiker & Co., Engr's., Barge Thompson Co., General Contractors, all of Atlanta.

Upper Center: Reynolds Building, Winston-Salem, N. C. Shreve & Lamb, New York, Archts., James Baird Co. New York, Gen'l Contrs.

Lower Center: Sterick Building, Memphis, Tenn. Wyatt C. Hedrick, Fort Worth, Texas, Architect.

Bottom: Smith-Young Tower Building, San Antonio, Texas. W. E. Simpson Co., San Antonio, Engineers. McKenzie Construction Co., San Antonio, General Contractors.

FABRICATED
Structural
Steel is the
trunk of the mod-
ern skyscraper.
Without the
strength and com-
pactness of steel the
great building heights
of today would not be
possible.

Over a period of years we
have designed, manufactured
and erected the steelwork
for a great number of tall
buildings from Virginia to Cali-
fornia. The four shown here are
recent and typical. But we are
proficient not just in skyscrapers or
big bridges. We do lots of small,
simple work and an endless variety of
small, intricate, exacting fabrication.
Large or small, all orders receive the
same careful attention and handling. Let
us quote you prices and deliveries on your
work.

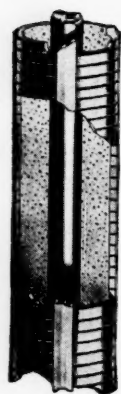
VIRGINIA BRIDGE & IRON CO.

Roanoke Birmingham Memphis Atlanta New Orleans
New York Los Angeles Charlotte Dallas El Paso

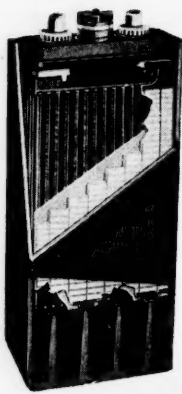
VIRGINIA BRIDGE
STEEL STRUCTURES



OPERATING COSTS CUT TO THE BONE



(at left) Cross-section of slotted rubber tube. Shows how active material is kept in, yet allows free access of electrolyte.



(at right) Cut-away section of the famous MVA type cell. Note construction is same as TL Type.

(at right)

Cut-away TL type cell showing famous Exide-Ironclad construction. There's not another battery construction like it. Positive plates are composed of finely slotted hard rubber tubes (see photo above at left). It's this different construction that makes Exide-Ironclad last so long in industrial truck service.

TIME AND MONEY SAVED—dependability assured, with this Type TL Exide-Ironclad Battery in your trucks. It is rugged, long lived and has plenty of reserve power for extra-heavy loads . . . 43% more capacity—more work, more miles per charge.



WITH EXIDE-IRONCLAD BATTERIES

If you are looking for a way to lower your operating costs, use Exide-Ironclad Batteries in your electric industrial trucks. These sturdy, powerful batteries—because of their great reserve power, low maintenance cost and unusually long life—enable your trucks and tractors to deliver the kind of service that cuts operating costs to the bone.

This is especially true where the new Type TL Exide-Ironclad Battery is used. Plate for plate, it has the same thickness and width as the popular Type MVA, and the same remarkable construction. In providing this battery of greater capacity . . . one that will do even more work per charge than Type MVA, yet fit in existing battery compartments . . . the plates of Type TL have been made slightly higher (4-7/8 inches in sizes from 15 to 29 plates).

If your present battery compartments will accommodate the Type TL Exide-Ironclad, or if they can be slightly modified to accommodate it, approximately 43% greater capacity is available to you in a battery of no greater base area than the old reliable Type MVA.

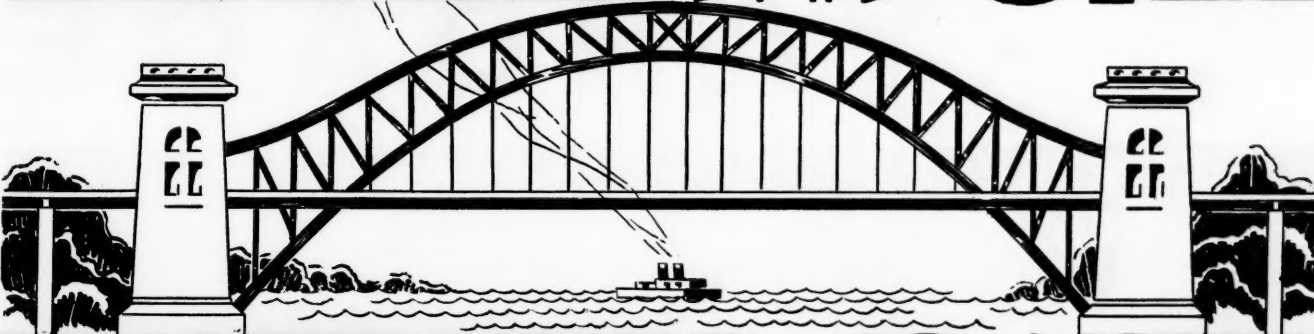
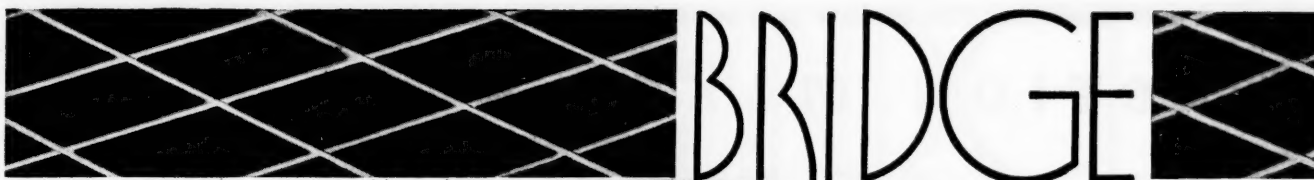
Find out *today* how you can reduce your operating costs still further. Learn more about the Exide-Ironclad Battery, whether it be Type MVA or Type TL. We will gladly send you a copy of revised edition of "Facts for Consideration in Selecting a Storage Battery." Perhaps it would be better to have an Exide representative call. No obligation of course.

Exide

IRONCLAD BATTERIES

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia
THE WORLD'S LARGEST MANUFACTURERS OF STORAGE BATTERIES FOR EVERY PURPOSE

Exide Batteries of Canada, Limited, Toronto



FLOORS

The concentrated loads of present-day vehicular traffic present a difficult problem to bridge engineers. It is a simple matter to construct adequate roadways but the weight of such construction is a serious factor; the more weight a bridge must carry, the more material is required to build it.

T-TRI-LOK has efficiently and economically solved the bridge floor problem. **T-TRI-LOK** is a new form of slab construction involving structural tees in combination with lighter flat bars mechanically interlocked with the tees. Installation is simple. **T-TRI-LOK** is manufactured and shipped in panels which are readily anchored to stringers, and with T members in contact, no form work is required to retain concrete fill. **T-TRI-LOK** forms an armored concrete, non-skid wearing surface of long life and high efficiency.

Send for booklet, "**T-TRI-LOK** Bridge Floor Construction." Carnegie engineers are also at your service.

CARNEGIE STEEL COMPANY

Subsidiary of United States Steel Corporation

PITTSBURGH  PENNSYLVANIA

153

T-TRI-LOK

TRACTION MAKES • • YARDAGE



SUMMER showers try to rob the contractor of precious hours — "Caterpillar" Tractors foil the treachery of mud and soft soils. Steadily, day after day, the yardage records climb as the "Caterpillars" pull full-loaded wagons. Here is a scene on the Mississippi where a dragline loads big Euclid wagons — the National Dredging Co. operates the outfit. Riding loose earth, climbing out of a deep rut, nosing in close to the shovel, rolling over the slippery places — conquering countless obstacles — are the feats of the "Caterpillar" track-type Tractors that win the approval of thousands of critical contractors!

Caterpillar Tractor Co.

PEORIA, ILLINOIS, U. S. A.

Track-type Tractors Combines Road Machinery

(There's a "Caterpillar" Dealer Near You)

Prices—f. o. b. Peoria, Illinois

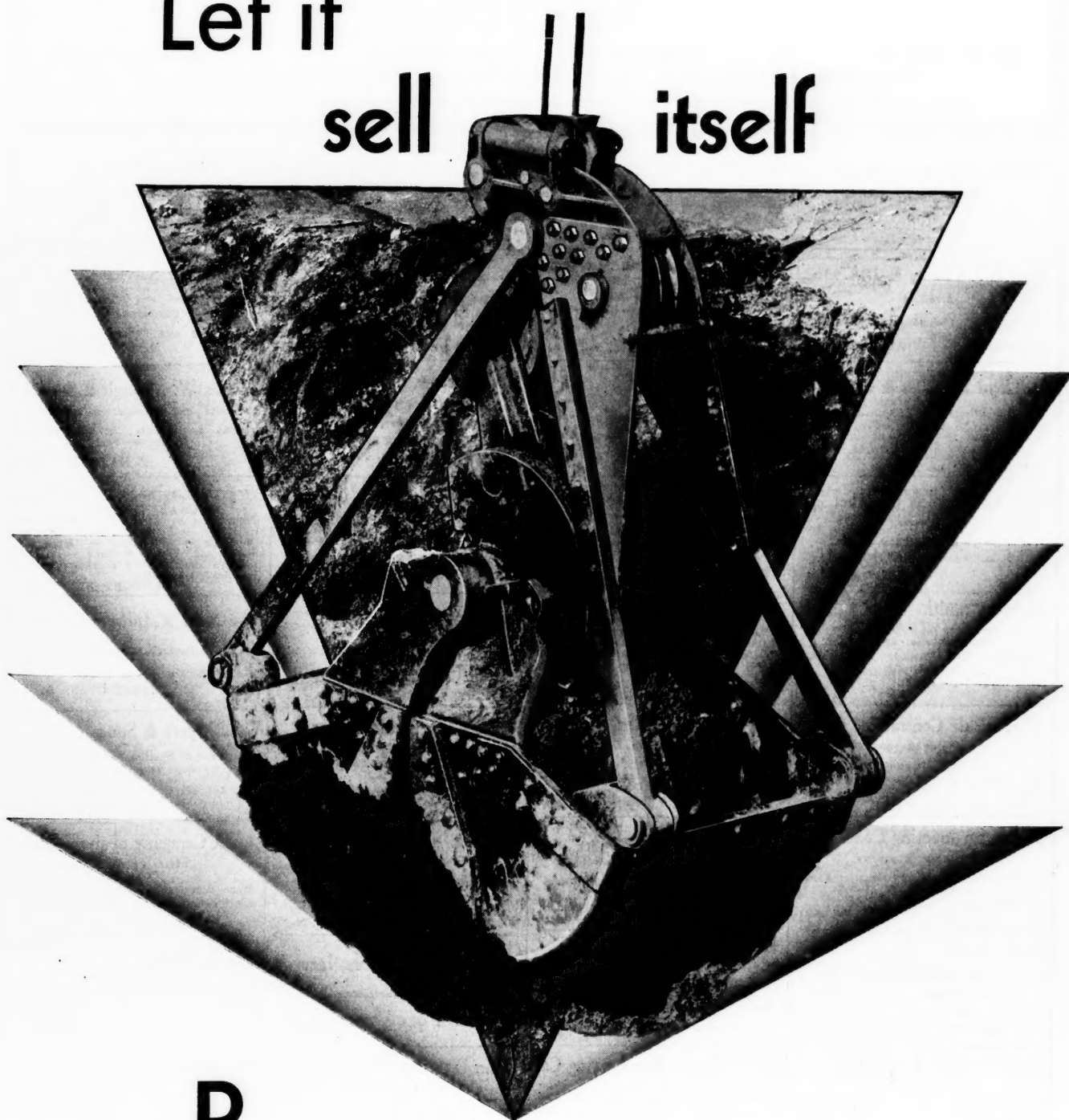
TEN	\$1100	TWENTY . .	\$1900
FIFTEEN . .	\$1450	THIRTY . .	\$2375
SIXTY	\$4175		

CATERPILLAR

REG. U. S. PAT. OFF.

T R A C T O R

Let it
sell itself



PUT a new WILLIAMS "Champion" Bucket on your work — watch it dig.
The "Champion" will prove itself the most powerful digger you have ever seen.

Here's one bucket that challenges competition, and invites comparative test. It is sold strictly on performance.

Write for description of the New "Champion".

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622 HAYBARGER LANE, ERIE, PA.

Branch Offices: New York, Pittsburgh, Cleveland, Chicago

WILLIAMS
BUCKETS-TRAILERS

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ACCOUNTANTS

CONTRACTORS

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1st Nat'l Bk Bldg.
NEWPORT NEWS, VA.**The John W. Cowper Co., Inc.**

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WASHINGTON, D. C.**J. L. Myers & Sons**Drillers of Shallow and Deep Wells
in the South Since 1894
Box 105, T. C. Station
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Charles James Metz

President

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ATLANTA, GA.**Joe B. Martin**

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Sixteen Years Actual Experience**The Howard-Hickory Co.**

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Representation in all Principal Offices
Clark Building, BIRMINGHAM, ALA.FAMILIARIZE yourself
with the SOUTH'S pro-
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Analysis tests and inspection of all building and construction materials.
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LITTLE ROCK, ARK.
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Wholly-owned Subsidiary of Standard Gas and Electric Company

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NEW YORK

PITTSBURGH

SAN FRANCISCO

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DESIGN—CONSTRUCTION

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SAN FRANCISCO

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NEW YORK

Tucker & Laxton*Contracting Engineers*

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Scofield Engineering Company*Consulting Engineers*

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STEAM AND ELECTRIC POWER PLANTS

CENTRAL PLANT HEATING SYSTEMS

Heating and Ventilating Equipments for Public and Private Buildings

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For Buildings, Bridges, Dams and all kinds of Minerals

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Mott Core Drilling Company

Diamond Core Drill Contractors

We Test Coal, Clays and Mineral Properties, Foundation Testing, Dams,
Bridges, Buildings, Wash Borings, Dry Samples.

MAIN OFFICE

HUNTINGTON, W. VA.

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Robert W. Hunt Company

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Laboratories and Offices in all Large Cities

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Southwestern Laboratories

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Established 1881

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MANY DIFFERENT TYPES TO MEET EVERY CONDITION.
SAFEST AND MOST PERMANENT CONSTRUCTION.

ENORMOUS SAVING OF COST

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SHORE-LINE BUILDERS, INC.
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WEBER SYSTEM **BULKHEADS**



WE LOOK INTO THE EARTH

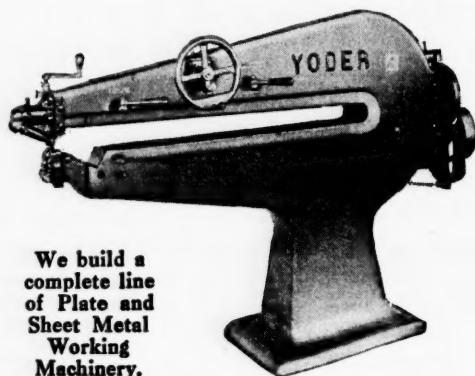
By use of Diamond Core Drills

We test foundations for buildings, bridges and
dams. We prospect coal and mineral lands in any
part of North and South America.

PENNSYLVANIA DRILLING CO.

1201-1215 Chartiers Avenue
Pittsburgh (Elliott), Pa.

DRILLING CONTRACTORS

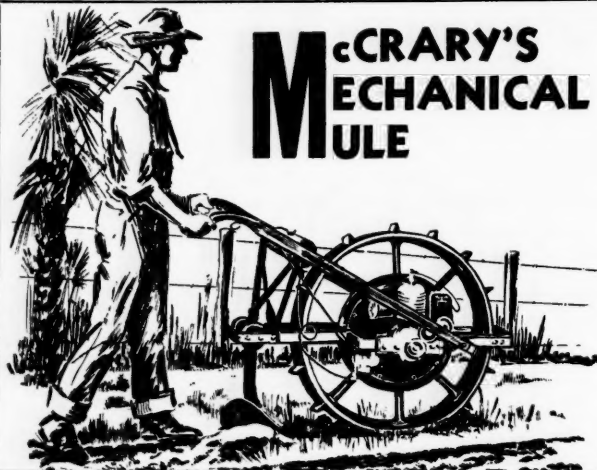


We build a
complete line
of Plate and
Sheet Metal
Working
Machinery.

Yoder No. S-60 Rotary Shear

This shear, with 60" gap to accommodate large sheets, will cut any weight of sheet metal up to 14 gauge. It can be used for short curves in any direction and will cut circles without running in from the side of material. This machine has two speeds controlled by hand lever and is equipped with a Yoder friction clutch. Write for further information.

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W. 55 ST. and WALWORTH AVE. CLEVELAND, OHIO
PLATE AND SHEET METAL MACHINERY SPECIALISTS



McCRARY'S MECHANICAL MULE

Scientific and Mechanical Cultivator and Plow Single Wheel—Gyroscopic Stabilizer

Will do more and better work than a mule. No chains. No belts. No exposed gearing. Splash oiling system—Balanced frame, no clogging. Greatest Farm Invention of the present Century. Agents wanted in every State and County. Liberal COMMISSION. Send for booklet. Secure your agency at once. Price \$275.00 F. O. B. Factory.

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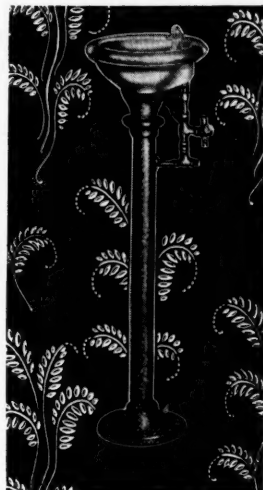
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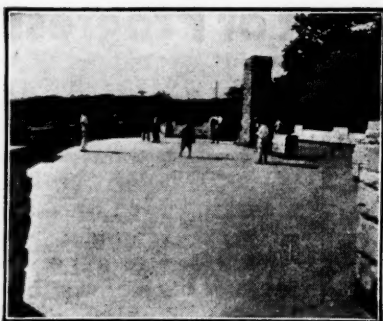
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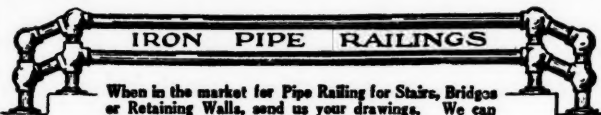
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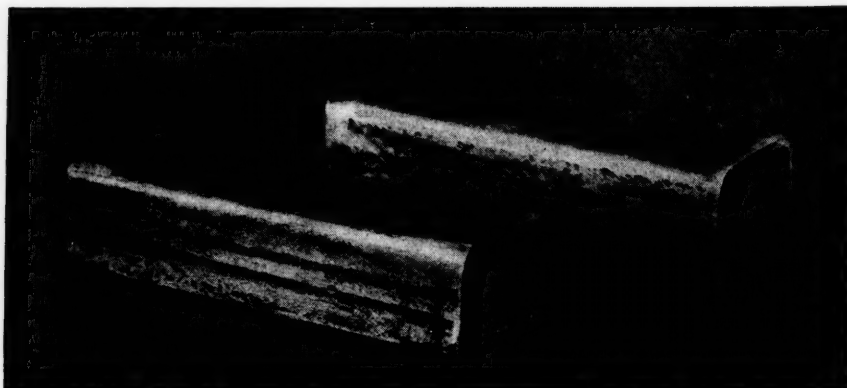


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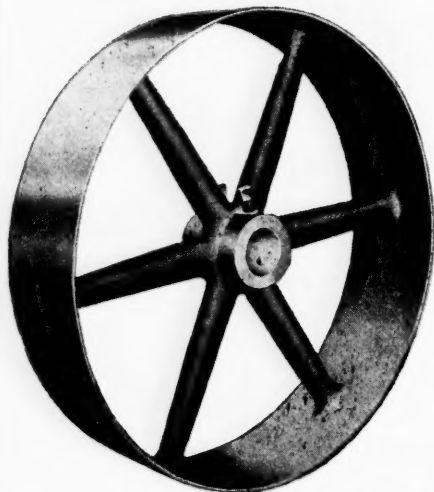
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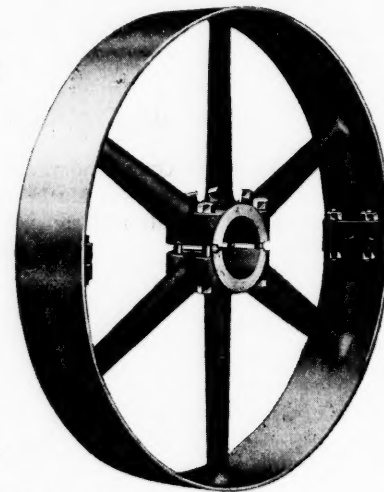
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Vol. C No. 11 }
Weekly }

BALTIMORE, SEPTEMBER 10, 1931

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Sound Reasons for Confidence

THE MANUFACTURERS RECORD does not believe for an instant that the world or this country is skidding toward collapse, although we recognize clearly the extent of the prevailing depression.

No exaggeration of basic facts is needed to show that economic conditions in this great country are actually not by any means as black as pessimists paint them. In comparison with the flamboyant year of 1929, present conditions may appear pallid, but far better for the country to start upward from a firm foundation than to topple from the apex of a pyramid of inflation as it did in October, 1929.

The factors to be cited in support of confidence in American stability are impressive. It must be borne in mind that the United States is and probably always will be self-sustaining. It can live in prosperity for years to come without direct or indirect dependence on other countries. As the MANUFACTURERS RECORD cited some weeks ago, this country's industrial output is \$86,000,000,000 a year. Of this, \$70,000,000,000 is in manufactures and \$16,000,000,000 in agriculture. As much as 95 per cent of this aggregate industrial production has been absorbed in and by the United States, and in times of normal activity about 90 per cent is used at home. The volume and diversity of our raw materials and our fabricated products enables American citizens to trade among themselves with profit. American freedom covers the whole field of economics.

In any computation of wealth or of future activity, it is necessary to count the resources upon which to base progress. In the United States we have coal and lignite reserves of 3,189,000,000,000 tons, or approximately 45 per cent of all the unmined coal in the world.

We have more than 84,000,000,000 tons of iron ore yet untouched. This constitutes about 48 per cent of the world's potential supply.

The present stand of saw-timber in the United States is around 2,214,800,000,000 board feet or about

65 times our annual rate of consumption. With continued forest growth and the progress being made in reforestation, notably in the South, to make timber a "crop" instead of "mining" it as in the past, our future wood supply should be inexhaustible.

Estimates of world reserves of sulphur, according to O. P. Hood, acting director of the Bureau of Mines, vary from 56,000,000 to 120,000,000 metric tons. Within the United States, the Texas sulphur deposits are said to contain in excess of 40,000,000 tons, without allowance for recent discoveries.

Copper ore reserves in the United States, held by 133 companies, as reported to the Federal Trade Commission, amount to 1,588,000,000 tons or a 40 year's supply at a normal annual rate of consumption.

This touches upon but a few of the varieties of resources that contribute to the wealth and future possibilities of this favored nation. Space will not permit detailed figures of our oil and natural gas which are constantly being increased by discoveries of new fields; our naval stores; our bauxite, and many other primary resources in abundance.

In actual manufacturing accomplishment for the utilization of these raw materials, the development of a chemical industry is fast approaching a point where it is predicted it will be a more definite contribution to American wealth and progress than any factor heretofore known.

In our water power plants a capacity of 13,800,000 horsepower has already been installed, while there is a minimum potentiality available which may be figured at 25,000,000 horsepower for 90 per cent of the time and 46,000,000 horsepower for 50 per cent of the time.

In developing these resources, America has established other assets, in religious institutions and educational buildings, that are well worthy of a place in any catalog of resources, however brief. There are 250,000 churches in America of various denominations; 260,000 public school buildings, and 6500

libraries. The libraries, counting those of 3000 volumes or more, provide 155,000,000 books for readers. There are 30,000,000 attending the public schools, and 60,000,000 persons are members of some church.

The business acumen and inventiveness, the energy and determination of the American people cannot be pictured in the form of figures. It is on this foundation of initiative and resourcefulness that profound confidence is based in the economic and political stability of the United States. The present depression, severe as it is, presents no excuse for whining or national self-pity. The man who predicts disaster, in the face of the fundamental resources and opportunities and prospects of the United States, proclaims himself a fool. The scores of millions of American men and women who have faith in the future will find their confidence fully justified.

American Tariff Not an Issue

PARTISAN bickering over the American protective tariff may be described as a sham battle waged for political effect in the dog-days. Ammunition for the anti-tariff forces is provided largely by groups which seek to promote American imports and to send American money abroad in payment, but outside this element the fight over the tariff is a traditional activity when Congress is not in session.

The interest of the South in a protective tariff is at least as strong today as it was in 1789, when a tariff measure was enacted as the first legislative act of the first American Congress.

Having today 55 per cent of the farms of the land, and 30 per cent in value of the country's agricultural products, will the South willingly forego the protection afforded under Schedule 5, Sugar and Molasses and their manufactures? or Section 6, Tobacco and Manufactures of Tobacco? or Section 7, Agricultural Products and Provisions?

As the South manufactures 67 per cent of all domestic cotton goods and as it is the site of 60 per cent of the country's active cotton spindles and 52 per cent of the country's active looms, will it repudiate the protection provided under Schedule 9, Cotton Manufactures?

With its great cement and ceramic industries, the South finds none too much protection under Schedule 2, Earths, Earthenware and Glassware. Southern chemicals, oils and paints find protection in Schedule 1, and the great iron and steel mills of the South would work under even greater handicap without the provisions of Schedule 3, Metals and Manufactures of Metals.

"The tariff as a political issue is exploded," the Kansas City Times comments. This view is corroborated by the votes of Southern members in both branches of Congress on scores of tariff items.

Wages at Home and Abroad

IN the MANUFACTURERS RECORD last week we referred to a voluntary reduction in the rate of wages by several union labor groups in the building trades of Baltimore. This was a constructive step in the general movement to bring about a more complete readjustment of the wage-scales that have been hampering industry. Yet the 9 to 16 per cent reductions made still leave the hourly rate from \$1.00 to \$1.75. On the basis of lower living costs, organized labor has been receiving what amounts to an increase of 20 per cent in the wage scale during the past 18 months. The effort arbitrarily to hold to the higher scale in the face of present conditions is contrary to sound economics and is against labor's own interest when so many are out of work.

With reference to the growing belief that wage reductions made quickly and universally, when commodity prices fell and capital income dropped, would more readily have stabilized the general situation, a recent editorial in Sales Management is pertinent. It points out that failure to take account of the fact that adherence to a wage-scale established when prices were inflated, after prices in general had been deflated, inevitably diminished the number of jobs and curtailed consumer buying.

"Stripped of all pretense and hypocrisy, the net truth is that many employers have reduced the pay of unorganized workers but have hesitated to mete out similar treatment to organized workers for fear of the consequences," writes B. C. Forbes in Forbes Magazine. That is an indictment of business management which some may resent, but why should organized labor receive special consideration at a time when every one must face conditions that have brought prices below the cost of production in so many lines?

The MANUFACTURERS RECORD believes in the highest wages possible, conformable to sound business practice. Furthermore, it believes that every right-thinking American feels the same way about it. Even at reduced rates that have been established in some instances, the American worker is infinitely better off than workers in other countries. That is as it should be. Our workmen are entitled to the best scale of living that can be obtained. Wage reductions are only temporary. Industry restored to a firm foundation will again surge upward and rates will be raised.

The Immigration Study Commission states that agricultural workers in Barbadoes receive 10 cents to 30 cents a day, with a weekly limit of four days employment. And from the Monthly Labor Review of the Department of Commerce for August are taken the following figures for various countries:

Italy—Bricklayers, 11 to 12 cents an hour; blacksmiths and carpenters, 11 to 12 cents; building laborers, 7 cents; road construction, 12 to 16 cents.

Germany—Building trades, 27.7 cents to 33.6 cents an hour; metal, 17.6 to 23.5 cents; mining, 17.6 to 27.9 cents; railway, 19.3 to 23.8 cents an hour.

Switzerland—Building industries, \$1.52 to \$3.07 a day; farm field hands, \$2.10 a week.

Sweden—Iron and steel, 21 to 30 cents an hour; foundries, 27 to 35 cents.

On a base index of 100 for 1913, such items as food, clothing, fuel and light, rent, etc., in the United States now stand at about 150. On a base of 100 in 1914, living costs in France in the first quarter of 1931 were up to 590. For Italy, on a base of 100 in 1914, the living costs this year have been 489.

Increase in Savings

ANNOUNCEMENT that American mutual savings banks deposits reach the unprecedented total of \$9,976,000,000 presents only a corner of a national financial picture of tremendous interest. Mutual savings banks operate in 17 states, and this \$9,900,000,000 total is 36.5 per cent of \$27,174,500,000 in savings in all banks reporting to the Comptroller of the Currency for 1930. It is reasonable to assume that the mutual savings situation reflects savings conditions throughout banking circles.

The \$9,976,000,000 aggregate is banked by about 13,000,000 persons, giving an individual average of \$753.56. This becomes a figure of conspicuous interest in comparison with \$745.21 on July 1, 1930, and \$740.85 on January 1, this year. Incidentally, about \$7,500,000,000 in all savings for around 20,000,000 depositors gave an average of \$375 for 1920.

An increase of 966,800 depositors, or 8 per cent, in mutual banks in the year ended July 1 may seem amazing to many observers in this period of depression.

Equally, an increase of \$831,000,000, or 9 per cent, in deposits in the same twelvemonth is provocative of thought.

The first thought is likely to be one of satisfaction that more than 10 per cent of the national population have an average \$750-protection in mutual savings banks alone. Similar protection, no doubt, also stands between millions of other savings depositors and the proverbial wolf.

The increase in the number of depositors, in the aggregate of deposits and in the individual average evokes consideration of the subject from several standpoints, and especially as to its influence in the present economic situation. Comparison of figures for recent years shows for the national savings account as a whole an increase of 8.6 per cent for 1927-28, a decrease of 3.3 per cent in 1928-29, static for 1929-30 and an indicated increase of 9 per cent for the year ended July 1, last. In actual figures, the aggregate savings as reported were: For 1927, \$26,032,000,000; 1928, \$28,132,000,000; 1929, \$27,198,000,000; 1930, \$27,174,000,000. On the basis of the mutual savings banks figures for 1930-31, the present total savings account may be computed at \$29,000,000,000.

Whether or not the increase of 8.6 per cent for 1927-28 was normal, the decrease of 3.3 per cent in

the following year assuredly was abnormal. Cash usually budgeted for the family savings account went into other channels. Millions were spent in initial payments on heavy installment purchases. Millions went into new homes or improvements to the old. Many millions went into the securities markets. The twelvemonth was an era of spending, as contrasted with customary reasonable saving. So it was that the national savings account shrank from \$28,132,000,000 to \$27,198,000,000, instead of increasing at the normal ratio.

From 1929 to 1930, installment commitments, contracted in the previous year, absorbed millions which might have gone into savings. Millions undoubtedly were used to make up deficits on paper profits transformed into actual money losses in the stock market debacle of October, 1929. The savings aggregate remained virtually unchanged. A normal annual increase again failed to materialize.

The increase in depositors and in aggregate and average deposits in 1930-31 might be considered natural under normal conditions. In view of the length and depth and breadth of the economic depression, this increase may be pronounced amazing.

Lower Construction Costs

THE prospective owner who has in mind the construction of a residence, a store or any other type of structure, or who contemplates improvements, can save money by doing the work now. Surveys of material costs covering lumber, lime, plaster, brick, steel, hardware, cement and practically all other products which enter into a building, show prices ranging 10 to 25 per cent lower than they were two or three years ago. During the past year lumber prices have declined 24 per cent; cement, 14 per cent; steel 8 per cent; paint 21 per cent and brick 7 per cent. Some material prices are at their lowest point in more than a decade.

There is an opportunity also at this time to employ the most efficient building tradesmen at lower costs than in many months. Efficient non-union labor can be obtained in many Southern communities, to handle jobs at a labor-saving up to 25 per cent as compared with recent levels.

Indicative of lower prices for construction are recent bids received on public projects: The Louisiana State Highway Commission received a bid for construction of the Ouachita River bridge, \$200,000 lower than the commission's estimate of \$780,000. On a bridge at Shreveport the award was \$180,000 lower than the estimate, and on another bridge at Alexandria the low bid was \$120,000 under the estimate.

Advertising increases the selling power of every salesman by reducing the sales resistance.—*Printers' Ink.*

Nearly Half-Billion Dollars for Southern Construction

THE total value of Southern construction, building and engineering contracts awarded for the eight-month period ending August 31 is more than \$492,000,000. Valuation of awards for August totaled more than \$41,600,000. These figures represent a compilation of reports published in the DAILY CONSTRUCTION BULLETIN and in the construction columns of the MANUFACTURERS RECORD each week.

Compared with contracts let during the first eight months of 1930, amounting to \$702,400,000, awards to September 1 indicate a sharp recession in the volume of building work this year. But to properly appraise the present situation two important factors should be considered. First, in June, July and August, 1930, contracts were let for major gasoline, oil and natural gas pipeline systems extending from the South and Southwest to distant industrial centers, and involving an expenditure of upwards of \$250,000,000. Last year's construction activity was featured by this class of work, which provided employment for thousands of skilled and unskilled workmen in the field and in production of steel pipe, compressors, motors, engines, telephone and telegraph communication equipment and building materials, and created a demand for contractors' equipment in large quantities, including such items as tractors, motor trucks, electric and acetylene welding outfits, ditchers, cranes, power shovels and backfillers. In the second place, construction costs this year show a decline estimated at 10 to 25 per cent below last year's figures. Therefore, while 1930 construction awards in the South set an all-time high record, this year's activity to date, considering general conditions is not without features of encouragement.

Although public building work by the Federal government, and cities, counties and political sub-divisions has predominated this year, private construction projects of a major nature have also been undertaken. In recent weeks there

has been a noteworthy increase in the number of industrial enterprises going forward; erection of new units, the building of additions and installation of new machinery, as well as comprehensive improvement programs to established plants, all this calling for repairs to structures and machinery, improved lighting, power and ventilating facilities and general rearrangement of layouts to facilitate economical production.

Numerous industrial firms are inaugurating plant improvement programs, to cut production costs as well as in anticipation of larger demand. Outstanding developments along these lines are noted in recent weeks in the textile industry. In the South, diversification is being practiced with wholesome results not only in agriculture but in the textile industry where dyeing and finishing plants, weaving rooms and other departments are being added to round out operations in the mills. Production of garments at or near the finishing mills is being undertaken by several companies. Much machinery is being scrapped by hosiery mills to make way for installation of the latest type equipment. Many weaving mills are scrapping antiquated and narrow looms, replacing them with high-speed, wide looms. Specialty mills are expanding their operations. Some Southern mills have begun night work anew, while others which have made extensions have placed additional operatives on the payrolls. Glass plants shut down for many months, while considerable sums of money in the aggregate have been expended for improvements, are now reopening. Shoe plants for the most part are operating at near capacity.

Important Industrial Projects Under Construction

A number of outstanding industrial projects are under way. The Southern Advance Bag & Paper Company, Inc., controlled by the Advance Bag & Paper

Company of Boston, is investing approximately \$2,000,000 in doubling capacity of its paper mill at Hodge, La., removing machinery and equipment from Howland, Maine, and necessitating the building of a 110,000-volt power line from Sterlington to Hodge.

The Southern Alkali Corporation, an affiliate of the Pittsburgh Plate Glass Company and the American Cyanamid Company, is going forward with initial work on a chemical plant at Corpus Christi, Texas, estimated to involve an ultimate expenditure of \$10,000,000. At Wilmington, N. C., operations on an experimental scale are under way by the Dow Chemical Company for extraction of bromine from seawater, looking to the erection of a commercial plant to cost perhaps \$2,000,000. The Arundel-Brooks Concrete Corporation is erecting on the waterfront at Baltimore a ready-mixed concrete plant with an initial capacity of 1000 cubic yards daily. The Phelps-Dodge Corporation interests, with refining plant at El Paso, may erect a \$1,000,000 rod and wire mill. The Bassett Chair Company, Bassett, Va., is completing a plant to produce 1500 to 2000 units daily; that is, chairs or benches.

As part of a \$5,000,000 track elevation project in Oklahoma City, the Atchison, Topeka and Santa Fe Railway has awarded contracts approximating \$1,500,000 for retaining walls and underpasses. Contracts will be awarded this month for the \$19,000,000 combination rail and highway bridge for the New Orleans Public Belt Railroad over the Mississippi. A huge gas compressor station is being constructed by the United Gas Public Service Corporation near Alto, La. The Dixie Terminal Company, Atlanta, plans soon to start work on a \$1,000,000 unit. Contracts are being let on various phases of the Pennsylvania Railroad's \$22,000,000 electrification program in Baltimore. A contract totaling \$426,000 for dredging in the Houston, Texas, ship channel has

been awarded. The Public Utilities Development Company, Louisville, proposes a hydro-electric power development in Washington and Nelson counties, Kentucky.

The Texas Empire Pipeline Company, Houston, last month awarded contracts for a 207-mile oil pipeline from East Texas fields to the Gulf. The Kansas City Terminal Railway Company has been authorized to construct a double track line at a cost of \$700,000. The Morgan Engineering Company, Memphis, is preparing plans for a \$750,000 floodway in Poinsett County, Arkansas. McWilliams Dredging Company, New Orleans, has contract at \$911,000 for dredging along the Louisiana and Texas Intracoastal Waterway. The Fort Worth and Denver City Railway Company, Denver, Colo., is constructing a 113-mile line in Texas. Beaumont has voted \$900,000 as the city's share of the cost of a \$4,000,000 viaduct project, on which the Southern Pacific Railroad will expend more than \$3,000,000. The Sinclair Refining Company, Fort Worth, will expend approximately \$2,500,000 in rebuilding the Pierce refinery. The Pennsylvania Railroad and the city of Louisville, Ky., are making plans for elevating railroad lines through the city at an estimated cost of \$3,000,000.

Public Utility Companies

Expand Facilities

Public utility companies are going forward with improvement programs in keeping with the South's building and industrial expansion. The Chesapeake & Potomac Telephone Company this year is expending in Maryland \$4,583,000 and its program for the next three years involves \$20,000,000. In Washington, improvements to the Chesapeake & Potomac central office building involve an expenditure of \$1,800,000. Telephone companies are investing heavily in new toll lines, both underground and overhead cable systems, as well as expending large sums for underground conduit lines in city and suburban areas. The power companies are extending their lines to serve new areas, erecting new sub-stations, making inter-connections with other systems, expanding lines in rural areas and generally improving distributing facilities.

South Pushes Highway

Construction Work

Road, street and bridge building activity takes the lead in the South's construction program this year. Most of the Southern states are in a position to take full advantage of increased Federal aid offered as a means of speeding up such work. Additional funds have been avail-

able from unexpended portions of bond issues and through the voting of new issues. Gasoline taxes continue to mount; due, first, to increased usage of motor vehicles, notably motor buses and trucks; second, to the raising of the tax per gallon, Florida having recently imposed a 7-cent tax. A number of major highway bridges account for heavy expenditures.

Private and Public Buildings for All Sections of South

Buildings in wide variety have been recently completed, are under way or projected in many parts of the South. Fort Worth's building and industrial program this year may be cited as an illustration. The Texas and Pacific Railway Company has completed a \$2,000,000 terminal warehouse; the Insull interests erected a \$500,000 fruit and produce terminal; the Western Union Telegraph Company is erecting a plant to house 75 additional operators; the Texas and Pacific Railway is completing a modern passenger station; a \$4,350,000 Federal narcotic farm is projected near by; plans are being drawn for a \$1,250,000 Federal Courts building; Eagle Mountain and Bridgeport dams, principal units in Fort Worth's new \$6,500,000 water conservation project, are under construction; Tarrant County is rushing to completion an \$8,000,000 road building program.

In St. Louis, \$30,000,000 is yet to be expended of an \$88,000,000 bond issue voted in 1923. Projects provided for include a new municipal auditorium, sewers, park improvements, hospital additions, an aquarium and numerous street projects.

Augusta, Ga., has a construction program entailing an expenditure of \$2,500,000. Included in the new projects are Veterans hospital improvements to cost \$750,000, an 18-hole golf course to cost \$250,000, a \$500,000 commercial hotel, two approaches to bridges across the Savannah River involving \$200,000, a railway bridge costing \$200,000, levee work totaling \$100,000 and \$500,000 for paving.

Many Big Buildings Still in

Plan Stage

Important building jobs will get under way in the next few months. Architects have been named for a \$1,250,000 Federal building in Fort Worth. The Harvard Terrace Development Corporation, Washington, plans 120 additional dwellings. Contract will shortly be awarded for a \$750,000 courthouse in Clarksburg, W. Va. On September 21 bids will be opened for a \$750,000 post office and

court house in Wichita Falls, Texas. On October 6 bids will be received for \$650,000 improvements to the Soldiers' Home at Johnson City, Tenn. The University of Maryland, Baltimore, has chosen architects for a \$2,000,000 hospital. Contracts will be let soon for a \$500,000 high school in Nashville, Tenn. Bids will be received this fall for an \$800,000 Southeastern Junior High School building, Baltimore. A \$1,500,000 Army and Navy general hospital is to be built in Hot Springs National Park, Ark. In Miami, Fla., \$2,080,000 is to be expended for a new Federal building. Vincent Bendix, Chicago, will build a \$350,000 residence at West Palm Beach, Fla. In Baltimore, Hutzler Brothers will expend approximately \$600,000 for a department store addition. Plans are being completed for the City of Houston and Harris County, Texas, \$1,500,000 charity hospital. Southern Pacific Lines plan a \$1,000,000 railway freight terminal building and office building in New Orleans.

Summary of Southern Activity in Building and Industry

AUGUST, 1931

	Contracts Awarded	Proposed Work
Apartment Houses and Hotels	\$624,000	\$117,000
Association and Frat- ernal	294,000	100,000
Bank and Office Build- ings	1,007,000	790,000
Church Buildings	538,000	662,000
City, County, Govern- ment and State Proj- ects	2,791,000	4,048,000
Dwellings	2,229,000	434,000
Miscellaneous	13,610,000	9,095,000
Roads, Paving and Bridges	13,174,000	16,930,000
Sewers, Drainage and Water Works	4,488,000	1,845,000
School Buildings	2,123,000	2,696,000
Store Buildings	735,000	115,000
Total	\$41,613,000	\$36,832,000
August, 1930	\$61,175,000	\$68,971,000
August, 1929	\$9,675,500	
August, 1928	\$6,538,000	
August, 1927	\$1,243,500	

SUMMARY BY MONTHS, 1931

	Contracts Awarded	Proposed Work
January	\$67,038,000	\$70,704,000
February	43,167,000	118,005,000
March	68,987,000	88,278,000
April	88,884,000	97,502,000
May	69,047,000	88,438,000
June	47,385,000	79,853,000
Six months	\$384,508,000	\$542,780,000
July	66,633,000	80,047,000
August	41,613,000	36,832,000
Total, eight months	\$492,754,000	\$659,659,000

Grain Elevator Addition

Sherman, Tex.—The Diamond Mill & Elevator Co., Kay Kimball, president, Fort Worth, awarded contract to the Jones-Hettelsater Construction Co., Kansas City, Mo., for a 400,000-bushel addition to its grain elevator here, bringing the total storage capacity to 1,750,000 bushels. J. H. McDuffy, Sherman, will be in charge of construction.

Signs of Better Business

AMERICAN BRIDGE Co., subsidiary of the United States Steel Corporation, has been awarded contract for 48,000 tons of structural steel to be used in the new Chicago post office. This order will give full-time employment to 1000 men for a period of four to six months.

THE PITTSBURGH PLATE GLASS Co. will resume operations on October 1 at its Clarksburg, W. Va., plant, providing employment for 200 persons.

THE AUSTIN Co., Cleveland, Ohio, engineers and builders, secured additional contracts representing investments of more than \$300,000 within the past several days. This amount brought the total construction work in August to more than 70 per cent above the July figure, according to W. J. Austin, president of the company.

WESTINGHOUSE ELECTRIC & MANUFACTURING Co. has closed a contract for elevator equipment in the new Bankers Trust Building, New York, totaling about \$700,000. Other recent orders were for post office buildings in New York and Chicago involving \$250,000 and \$800,000, respectively.

THE LACLEDE-CHRISTIE CLAY PRODUCTS Co., St. Louis, has started capacity operations of its Christie plant, necessitating an increase in the number of employees from 190 to 250. Specializing in refractories for the glass industry, the company is not materially affected by seasonal trends, and the recent increase in orders is attributed by W. J. Westphales, vice-president, to the cumulative effects of deferred buying during the past year or longer.

THE BULL DURHAM smoking tobacco division of the American Tobacco Company's plant, Durham, N. C., is working to full capacity for the first time in several years. Machinery that had been in storage has been replaced in the plant for expansion purposes. As a result of the increased production, the Golden Belt Manufacturing Company, makers of small tobacco bags, are working this branch of their industry day and night.

LENOIR, N. C., is a beehive of industrial activity these days with practically every plant operating at capacity, with mercantile and wholesale establishments thriving and with such bountiful crops on Caldwell County farms as no one can remember in previous years. Last month Lenoir furniture factories shipped 469 solid carloads of furniture to outside markets and 50 "split" cars to nearby towns and cities.

THE EVANS, INMAN LUMBER Co. plans to begin operating its Hapeville, Ga., plant at full capacity beginning about September 15, providing employment for 500 persons to bring out the lumber and 50 to 75 to operate the mill.

MCALLESTER HOSIERY MILLS, Chattanooga, Tenn., William L. McAllester, treasurer and general manager, announces the mills are maintaining a greater rate of production than at any time since their organization seven years ago. Orders on hand insure capacity operations for the next three months.

THE HARDWICK WOOLEN MILLS, Cleveland, Tenn., H. B. Moore, vice-president and general manager, are operating on a full-time basis, with 50 per cent of the plant running nights for the past three months.

THE BLUE RIDGE GLASS CORP., Kingsport, Tenn., has resumed operations after nearly five months of inactivity.

BALL BROTHERS Co. has resumed operation of the stamping department of its Huntington, W. Va., plant after an idleness of four years. The product is zinc tops for Mason jars. Resumption of operations is due to an unusually heavy demand for preserving containers.

THE MIDDLE WEST UTILITIES Co. reports that gross earnings of the company's subsidiaries in the year ending June 30 totaled \$183,391,397, an increase of 4.6 per cent over the corresponding period a year ago. Subsidiaries gross earnings for the second quarter of 1931 were \$44,264,822, compared with \$44,344,259 for the second quarter of 1930.

SAVANNAH, GA., according to the Morning News, shows marked activity in its steel, wood and bagging industry. The Steel Products Co. is now building new steel-bodied trailers for small trucks, and recently enlarged its plant to handle increased output of sheet metal and structural steel departments. The United Shank & Findings Co. recently added to its plant for manufacture of shoe shanks and expects to double its output. The Ludlow (Ga.) Bagging Co. is working at night to supply demand.

THE ICE INDUSTRY promises during 1931 to have the best year in its history, says Leslie C. Smith, secretary of the National Association of Ice Industries, Chicago. Contrary to general opinion, says Mr. Smith, the industry is helped by the advertising and selling of mechanical refrigerators. Half of the 28,000,000 families in the United States have no refrigeration of any kind. That the use of ice for cooling homes, small shops, restaurants, medium sized theatres and hospitals, will equal the volume now used for icing refrigerator cars, is anticipated by the industry.

EMPLOYMENT has improved in Louisville, Ky., since the first of the year when Kentucky was still feeling the effects of last summer's drought. That unemployment will be less this winter is the conclusion reached by city officials and Board of Trade representatives after a study of conditions.

MONROE MORGAN, president of the Hardwood Manufacturing Co., Meridian, Miss., announces the execution of contracts providing for at least a full year's continuous operation of the plant, which gives employment to 70 persons.

HERCULES POWDER COMPANY'S BRUNSWICK, GA., plant resumed full-time operations September 1, after making extensive repairs to machinery and equipment.

THE UTICA KNITTING MILLS, Anniston, Ala., unit is installing 20 additional circular knitting machines costing \$30,000, because of prospects for further increase in business. The unit is operating normally with 275 operatives on the payroll.

A Modern Creosoting Plant

ONE of the modern wood treating plants of the country is located at Hagerstown, Md., the development of the Century Wood Preserving Company, a division of the Wood Preserving Corporation, Pittsburgh, which controls 21 treating plants throughout the United States east of the Rocky Mountains. The Wood Preserving Corporation, while a comparatively new concern, includes such companies as the Ayer & Lord Tie Co., the National Lumber & Creosoting Co., and the Century group of plants, whose names are among the oldest in the field of wood preservation.

The Century group includes seven wood preserving plants, located at Reed City, Mich.; Orrville, Ohio; Broadford Junction, Pa.; Nashua, N. H.; Hagerstown, Md., and Charleston, S. C. It maintains sales offices in Pittsburgh and Philadelphia, Boston, New York, Charleston, S. C., and Baltimore.

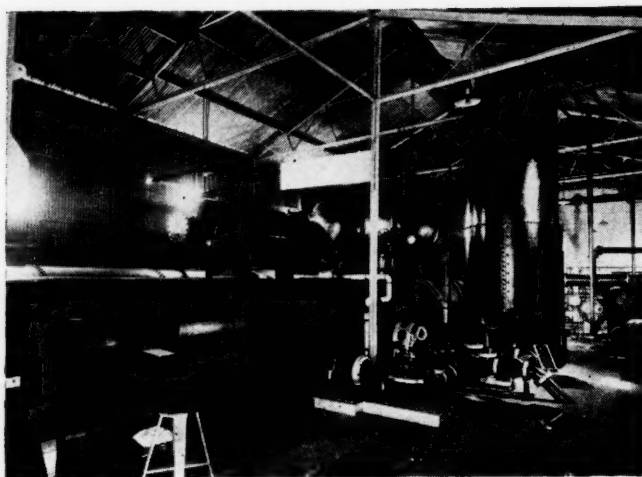
Construction of the Hagerstown plant was begun in 1929. In 1930 the partly completed operation was taken over by Grant B. Shipley, president of the Wood Preserving Corporation. Mr. Shipley has designed and constructed about 40 per cent of the country's latest

type pressure treating wood preserving plants; by various additions and alterations he has made the Hagerstown property conform to the up to date trends in design of treating plant facilities. The new plant will be able economically to distribute treated material in Maryland, Pennsylvania, District of Columbia, West Virginia, Virginia and parts of New York and New Jersey.

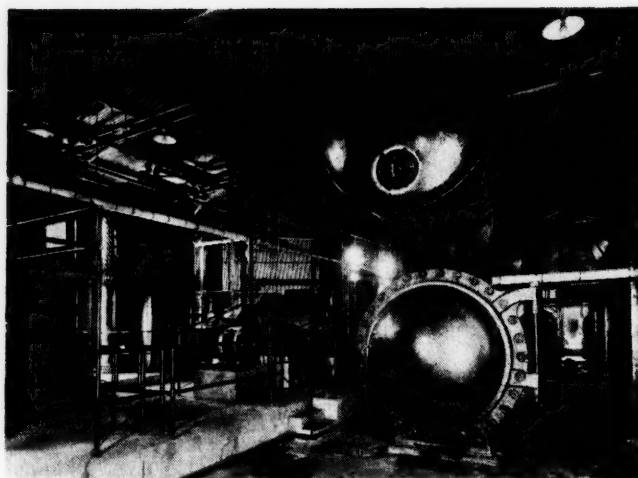
The plant covers an area of about 35 acres and is located on the Western Maryland Railway. Well-drained seasoning yards, where already several hundred thousand feet of material is



General View of Creosoting Plant and Storage Yards in Hagerstown, Maryland



Interior View of Wood-Treating Plant



View of Rueping Tank and Treating Cylinder

stacked for drying, are so arranged and interspersed with tracks that all mechanical handling machinery as well as standard railroad locomotives can be operated within a few feet of any stack of material. Forest products carried in these yards include railroad ties, timber, lumber, poles and piling. The stock is made up of Southern pine and hardwoods, the plant being so located as to permit it to draw economically for raw materials on both the Southern pine districts and the central eastern hardwood belt.

Between 75 and 100 employes will be required, and for the most part they will be drawn from the vicinity of Hagerstown. Experienced treating engineers trained in other plants of Shipley design will supervise operations.

There are two treating cylinders with an annual capacity of 45,000,000 board feet. The equipment is designed to make possible utilization of all standard pressure processes. Most of the material, however, will be treated by the Rueping process, which combines an initial application of compressed air, followed by introduction of the preservative from a Rueping tank located over the treating cylinder. The preservative is forced into the wood under pressure, and after a sufficient amount of material has been injected, the chemical is pumped out and a final vacuum drawn to pull out the excess preservative. The plant is equipped also for the Boulton process, which permits the treatment of green or partly seasoned woods.

Creosote, zinc-chloride, and zinc-meta-arsenite are used as preservatives. A clean cylinder is reserved for the two latter which are colorless chemicals. Zinc-meta-arsenite, or Z-M-A as it is commonly called, and zinc-chloride are particularly adapted for use when the treated material is to be painted.

George M. Hunt, in charge of the sec-

tion of wood preservation, U. S. Department of Agriculture, Forest Service, states that, "The amount of protection against decay, insects, or marine borers given by a good wood preservative depends very largely upon the penetration secured." At the Hagerstown plant every precaution is taken to achieve this maximum penetration. Before material is placed in the treating cylinder, each tram carload is weighed on track scales and the weights are recorded. After treatment, the material is again weighed and thus a record is kept of the amount of preservative injected into the wood. Every step in the application of preservative, after the material has been placed in the cylinder, is carefully checked and rechecked by skilled treating engineers. Scales, thermometers, time clocks, indicating and recording gauges on the cylinders are designed to eliminate any possibility of error, to insure the right intensity and duration of pressure, and the right temperatures; thus facilitating maximum penetration.

A chemical testing laboratory is maintained at the plant so that all preservatives may be carefully analyzed. Samples of material from each treating charge are given a final test for penetration.

The company feels that industries which have been slow to realize the economies of using chemically preserved wood, will be able to effect great savings in future, now that treated lumber in many sections of the country is almost as readily available as untreated wood. They point out that the country's railroads have long been using treated ties and bridge timbers, and the Department of Commerce estimates that the longer life of such materials effects total savings daily to all the railroads of over \$145,000.

Research and study have brought to light the large annual losses suffered by timber in service due to decay and insect

damage. The company contends that economy in using treated material is steadily becoming more widely recognized and that many industries will be able to show savings proportionately as great as the railroads have made.

Construction of the Hagerstown plant was handled by the company's own forces, and most of the material used was from its own resources. Boilers, three of the storage tanks, and pressure measurement scale tanks were furnished by the Coatesville Boiler Works, Coatesville, Pa. Two storage tanks were supplied by the Petroleum Iron Works, Warren, Pa. Pumps were furnished by the Power Equipment Co., Pittsburgh, Pa., the Dayton-Dowd Co., Quincy, Ill., and the Frederick Iron Co., Frederick, Md. Air compressing equipment was supplied by Chicago Pneumatic Tool Co.

\$6,500,000 Smithsonian Extension

Washington, D. C.—The Allied Architects, Inc., Washington, have been commissioned by the Executive Committee of the Smithsonian Institution to prepare preliminary plans for the extension of the Natural History Building of the United States National Museum. Construction will involve two new wings, for which an appropriation of \$6,500,000 was authorized.

Correction

Walter Parker, the writer of the article, "Artificial Farm Respiration Fails," published in the MANUFACTURERS RECORD of August 27, was erroneously identified as "Economist, Fenner & Beane." Mr. Parker resigned from that organization the first of the year, and his official connection now is Economic Counsel, American Cotton Shippers Association, New Orleans.

Develop Home-Work Industries

By

STANLEY F. MORSE

Agricultural Engineer, Statesburg, S. C.

AS one effect of the world economic deflation, we are beginning to see the importance and value of small things. Small but sure profits, moderate but steady wages, and even just a good living and freedom from debt weigh much more now than in recent years. In this connection, a first-hand study of economic conditions in England, France, Spain and Italy has convinced me that the lot of the "European peasant" can stand comparison with such American "independent" farmers as may be hardly able to make ends meet, to say nothing of a profit.

The main object of the European peasant is to raise enough for his family to eat, and he does so, raising wheat and other foods at a cost which would be uneconomic if the labor of himself and family were figured at current wages. Thus, in Italy, with an import duty of 67 cents a bushel on wheat, it has been found that the cost of imported wheat plus the duty was less than it costs the Italian farmer to produce it. Yet, Italy raises wheat and the country is in good condition.

Perhaps, we shall have to revise some of our standards and accept a conclusion that, instead of a farmer's time being worth so much per hour or per day, it is worth what he produces with it. Surely, the farmer who so manages that he raises most of what his family eats and sells enough products to buy his other necessities is better off than the larger scale farmer who fails to do this, and in addition makes no money on his regular farm products, and has to borrow to live.

In articles in the *MANUFACTURERS RECORD*, August 21, 1930, and January 1, 1931, I pointed out that our agricultural problem would virtually solve itself if left alone, because the operation of the economic laws would eliminate those farmers who were unable to operate at a profit or supply their own living needs. This, however, would create another

problem of what to do with the eliminated farmers. As one remedy, I suggested that decentralization of certain industries and the establishment of smaller units in rural districts would provide part-time employment and sufficient ready cash for nearby farmers "living at home" on their own farms. I now wish to suggest another source of income for the support of rural families, to take up some of the labor slack.

During a recent visit to investigate agricultural conditions around Limoges, France, I visited the Industrial Museum maintained to exhibit the products of some 50 industries of the Seventh Economic Region of France. Attractively displayed are numerous samples of the artistic and useful articles produced there. What impressed me was that most of these products were made from local raw materials, such as kaolin, wood, hides and farm crops. Here is a strongly industrialized agricultural region, with many of the farm products being used as raw materials. For instance, the excellent beef breed of Limousine cattle produces good quality hides, which are tanned into fine leather from which shoes and other leather goods are made. Surely, in many sections of the South there are places where raw materials, cheap hydro-electric power and an unemployed rural population offer an opportunity for industrial development that is well worth study.

Another very striking fact about the articles offered for sale in France and Italy is their beauty and artistic merit.

Woodwork, needlework, glassware, porcelains, fabrics and the like are evidence of individual workmanship of a high order. These lovely things almost sell themselves; no wonder that American tourists feel impelled to buy to the limit. This indicates that there is a market in this country for real quality goods of a sort that we now import.

Are we not rather sated with standardized, unartistic, machine-made articles which lack the individuality of the European imports? What is now needed to stimulate trade is something different to sell—something that people will want to buy. Can we produce such things in this country? Of course, I understand that many of the European craftsmen have inherited their trades and have grown up in them; yet, Italy sends instructors to teach its women needlework and lacework and new designs. Why could not we, employing either some of our own high-class workmen or imported worker-artists, begin to teach our own people in a few selected rural communities how to make some of these fine goods?

We have the raw materials, the power and intelligent labor. Cheap power should permit the operation of certain machines, such as lathes and looms, at home or in small factories. In the South, we have kaolin for fine porcelain, clays for pottery, cotton and wool for woven goods, needlework and special fabrics; woods for fancy boxes, canes, etc.; hides for fine leather goods, iron for metalwork, and so on. Some home woodworking industries have been established in western Carolina. Would it not be possible for the businessmen of a community to underwrite the employment of instructors and the development of such handicraft or home-work industries, to provide profitable work for the farmers and their families who need to supplement their meagre farm incomes? We have become so accustomed to low-cost mass production that the handwork

artist seems to be almost out of the picture. But, if we can make quality products to sell at a higher price than machine-made goods, we should be able gradually to capture the market now held by imported articles.

Several attempts have been made in this country to introduce "home handicraft" work and "arts and crafts" work, with more or less success. The Biltmore Industries homespuns at Asheville, N. C., and the output of Elbert Hubbard's "Roycrofters" in New York are examples. Apparently, now, there is a need for small factories and home handicraft industries for certain rural districts, and the decline of costs and prices indicates that new outlets for raw materials and the stimulation of trade by new products may be beneficial to business. However, it is evident that home handicraft developments will be slow, although vocational training under the Smith-Hughes Act and the teaching of "art" in country schools, especially in the consolidated schools, might well have in view this practical end of developing home industries. Already, in Massachusetts, the Women's Educational Union of Boston is working to establish a New England rural industries association to develop handwork arts and crafts in rural sections.

The present crisis may be met in part by taking stock of our resources and opportunities, making long-time plans for developing them and then getting behind these plans with capital and hard work, to push them to a successful conclusion. States and counties well might undertake economic surveys and prepare practical development programs. This is a

job that can best be done by citizen's organizations, in a businesslike way—the more these projects are divorced from politics and governmental red tape, the greater success they are likely to achieve.

Helium in the Texas Field

The 6,000,000 cubic feet of helium required to inflate and float the giant new airship Akron was produced at the Government plant near Amarillo, Texas, which furnishes all the helium for the Army and Navy. Negotiations are under way for acquisition by the Government of gas rights underlying about 50,000 acres.

In the two years of its operation by the Bureau of Mines, the Amarillo plant has produced more than 22,000,000 cubic feet of helium, at an average net cost of \$11.47 per 1000, and a minimum of \$5.95 in June of this year. A pipeline conveys the gas from the Amarillo field to the plant, a distance of about 12 miles, the high rock pressure of the structure obviating any necessity for compression of the gas.

Electrical power at the plant is produced by gas-engine-driven generators. Two deep water wells, with turbine pumps, furnish water for all purposes and, except for a few easily obtained raw materials, such as lime, lubricating oils, pipe-fittings, etc., the helium plant is not dependent on any outside agency for successful operation. The gas field is estimated by the Bureau of Mines to be good for many years to come.

3,400,000 Cubic Yards Dredging

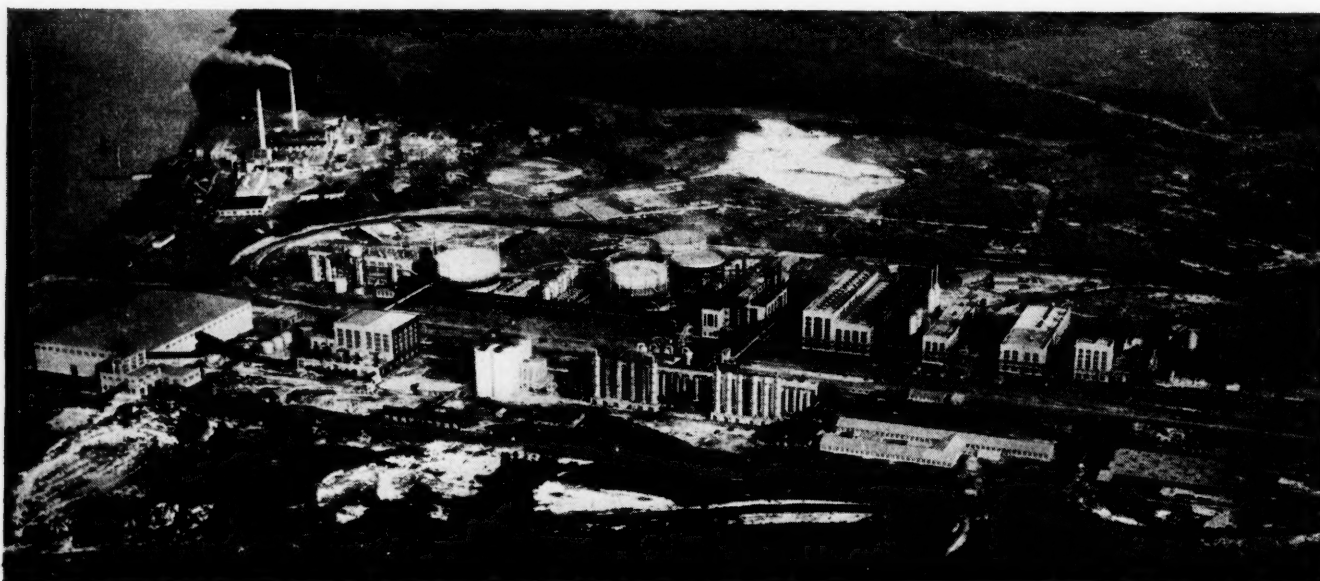
Gulfport, Miss.—Bids will be opened in duplicate September 18 in the office of the United States Engineer, Mobile, Ala., for dredging approximately 3,400,000 cubic yards of material, including overdepth and overwidth, from the Gulfport ship channel and anchorage basin. The work will be done in the existing channel in Mississippi Sound, beginning in a basin 1320 by 2640 feet, and extending to deep water in the anchorage at Ship Island, a distance of about 10 miles.

\$2,000,000 School Program

Galveston, Tex.—Plans will soon be completed for a \$350,000, two-story junior high school here as a part of a \$2,000,000 school building program inaugurated several months ago by the Galveston School Board. Giesecke & Harris, Austin, and R. R. Rapp, Galveston, are associate architects. L. D. Royer, San Antonio, is the mechanical engineer.

\$400,000 Petersburg Post Office

Petersburg, Va.—Preliminary surveys of a site for a new post office building here have been made by an engineer of the Treasury Department, Washington, Jas. A. Wetmore, Acting Supervising Architect, and actual construction is expected to be under way within six months. An allocation of \$400,000 has been made for the building.



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Air View of Giant Plant of Atmospheric Nitrogen Corp., Hopewell, Va.

Louisiana Farm Conditions

CONDITIONS in the agricultural communities of Louisiana show improvement over conditions in 1930. Because of the application of sound principles of economics, and through conservation of foodstuffs and by profiting from the experiences of the past 18 months, our agricultural population, which means the major portion of our people, will enjoy during the coming 12 months uniformly better conditions than were experienced last year.

In the strawberry belt, which includes the parishes of Tangipahoa, Ascension, Livingston, St. Helena and St. Tammany, there was harvested this season a strawberry crop which smashed all previous records, and produced a cash yield of \$9,000,000. This comfortable amount enabled the farmers to pay up old obligations, improve their equipment, and lay aside a substantial reserve for the rainy day.

It is too early yet to forecast conditions in the sugar section, but in the past 30 days there has been improvement in the prospects for a good crop.

The rice crop in Southwestern Louisiana will be affected in some instances by the presence of salt water, and the price, which for the last several years has been continuously unsatisfactory, shows no indications of improvement.

By
FRED W. ELLSWORTH
Vice-President,
Hibernia Bank & Trust Co.,
New Orleans

Can manufacturers report that they are furnishing to the farmers two and a half times as many containers for canning purposes as in any previous year. Farmers in those sections which last year suffered severely from the drought are this year canning their surplus food, with the result that while most of them will have limited cash they will at least have enough to eat and to spare.

The cotton farmers have learned by experience that they should raise their own foodstuffs, and this feature during the coming winter will prove decidedly advantageous, as compared with conditions last year. The cotton crop of Louisiana promises to be a good one; and the cost of making it will be less than usual, but it looks now as though the price will be insufficient to provide the farmers with any considerable surplus,

as they are endeavoring to pay off the Government loans made during the drought last year. According to the best estimates obtainable, the cash return from the 1931 crop will be about 11 per cent less than from the 1930 crop, exclusive of income from cotton seed. In this connection it is interesting to note that cotton, which is popularly but erroneously considered a major source of income in the South, brings in an amount annually which is less than 7 per cent of that produced by manufactured products. In Louisiana this ratio is less than 11 per cent. In other words, the value of manufactured products of Louisiana for 1929 was \$684,000,000, while the total value of the cotton crop including cotton seed was \$78,000,000.

In the past two years, with agricultural and industrial conditions in many states reflected in the large number of bank failures, Louisiana has been singularly fortunate, for only a few Louisiana banks have closed their doors—six, to be exact—and three of these have since reopened. Moreover, according to our individual experience, only 10 per cent of our correspondent banks in Louisiana are finding it necessary to borrow money, and their credit balances in New Orleans are approximately 13 per cent greater than at this time last year.

\$4,500,000 University Buildings

Austin, Tex.—Preliminary plans have been approved by the Board of Regents of the University of Texas for 8 campus buildings to be erected at a cost of approximately \$4,500,000. These include a dormitory for men, library building, several science buildings including an engineering structure, student activities building, etc. Herbert M. Greene, La-Roche & Dahl, Dallas, are the architects, and Paul P. Cret, Philadelphia, Pa., consulting architect.

The board received \$110,000 from the trustees of the George W. Littlefield Memorial and plans to erect a monument at the south entrance of the campus, using bronze figures by Pompeo Coppini.

New York. It also approved a \$130,000 Waller Creek boulevard through the campus and inspected the Cavanaugh tract, on which a men's dormitory will be erected. Dr. W. J. Battle is chairman of the faculty building committee.

\$907,000 Federal Warehouse Bid

The H. R. Blagg Co., Dayton, Ohio, submitted low bid at \$907,895, to the Office of Public Buildings and Public Parks, Lt.-Col. U. S. Grant, III, Director, for the construction of a Federal warehouse at 7th, 9th, C and D streets, Washington. Lockwood Greene Engineers, Inc., New York, are the consulting engineers.

\$618,000 Excavation Contract

Washington, D. C.—Contract for excavation for the \$4,750,000 Interstate Commerce Commission building, \$4,500,000 Department of Labor building and a connecting wing, has been awarded by the Treasury Department, Jas. A. Wetmore, Acting Supervising Architect, Washington, to McCloskey & Co., Inc., Philadelphia, Pa., at \$618,730. These buildings constitute the largest unit of the Government's triangle building program, the site extending from Twelfth to Fourteenth street on Constitution avenue. Clearing work has practically been completed. Arthur Brown, Jr., San Francisco, Cal., is the architect for the structures.

Birmingham

Solves

Crossing

Problem



Twenty-Second Street Viaduct, One of the Completed Projects in the General Plan

By

JACK C. YORK

Birmingham, Ala.

A FINAL solution of the downtown grade-crossing elimination problem that has faced Birmingham for 25 years will be reached within the next few months, on completion of the two remaining units of the city's \$4,000,000 viaduct-underpass project.

With the \$4,000,000 available, the cost being divided between the city and the railroads, Birmingham has built one large viaduct and three underpasses, all in the very heart of the downtown district.

Agitation for grade-crossing elimination had long been under way, when in building the Twenty-first and Twenty-fourth street viaducts provision was made for future construction of underpasses at three main traffic arteries, at Fourteenth, Eighteenth and Twentieth



Retaining Wall of Alabama Great Southern Railway

streets. Also, when the old overhead wooden bridge was built at Twenty-second Street, provision was made for

raising tracks to allow for underpasses to the west.

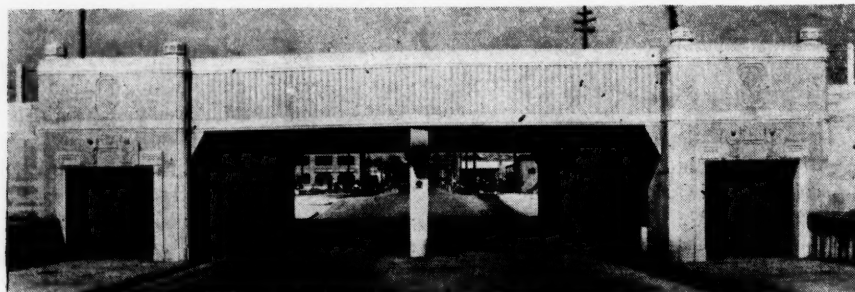
However, when the city definitely decided to take steps toward construction of underpasses at those three important streets, city officials encountered stiff opposition. The problem was this: 1—The city wanted underpasses constructed. 2—The railroads wanted viaducts built.

The city claimed that damage to abutting property would make the cost of viaducts prohibitive. The railroads claimed that cost of raising tracks to provide for underpasses would be too high. So the city instituted friendly suit against the carriers, seeking to force them to construct underpasses as a safety measure. Carried to the United States Supreme Court, a decision was handed down in favor of the railroads, the decision holding that the city had a right to demand elimination of dangerous railroad crossings, but could not compel the roads to build any particular type of grade-crossing eliminator. So the roads offered again to construct viaducts at Fourteenth, Eighteenth and Twentieth streets. The city refused.

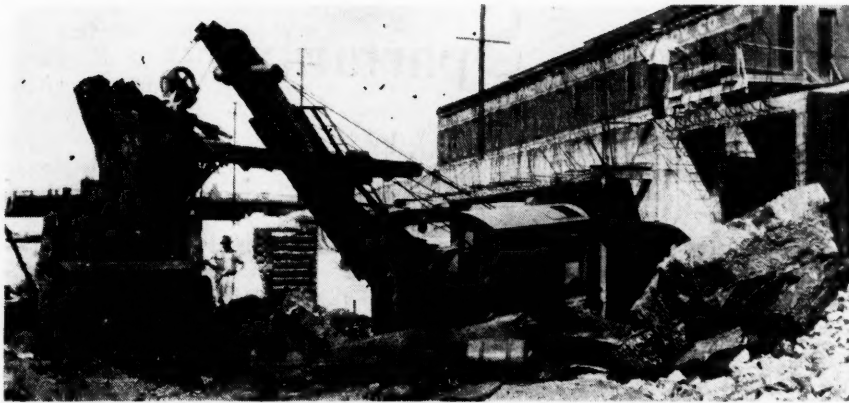
And there the matter rested until an ordinance was adopted by the City Commission compelling the carriers to construct viaducts at some 50 crossings in widely scattered sections of the city. Within a week the railroads had consented to pay their pro-rata share of cost of construction of underpasses at Fourteenth, Eighteenth and Twentieth streets. The City Commission then repealed its ordinance demanding grade crossing elimination at the 50-odd places in other sections of the city.

It was at this time that the city decided the only way to finance the project would be through a bond issue. The issue was almost unanimously adopted by the public.

As work got under way, City Engineer A. J. Hawkins and railroad engineers realized how well the underpasses lent



Completed Fourteenth Street Underpass. Indirect Lighting Illuminates the Dark Interiors



Beginning Excavation for Foundation of Section 2 of Twentieth Street Underpass

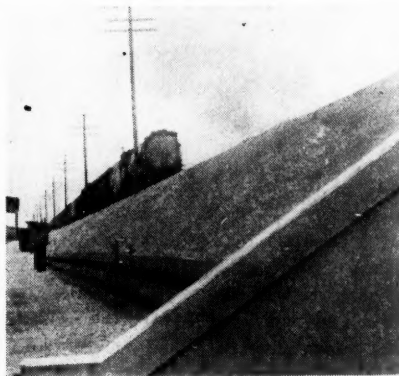
themselves to physical and topographical conditions. The Fourteenth Street underpass is now complete and in use. The length of its bridgework is 100 feet. In constructing this underpass the tracks were first elevated and the underpass built beneath the tracks. This process was discarded on the other projects, engineers realizing that considerable money could be saved in first erecting the passes and then moving the tracks on to the bridge.

The Eighteenth Street underpass will be the second completed. In order not to move the tracks until concrete construction was complete, the underpass was built in four sections. Two of those sections have been completed and tracks transferred to the concrete work, and are now in use. One other section is under construction as this is written, with the fourth to be started as soon as tracks can be moved elsewhere to permit construction. The Southern Construction Co., Birmingham, has general contract for the project.

The Twentieth Street development, which has closed Birmingham's main street, is the outstanding project of the four. In addition to a heavy flow of pedestrian and vehicular traffic, this street is a main artery north and south for street railway traffic. Approximately 100 street cars pass over the track intersection each hour. The length of the Twentieth Street underpass is estimated at 1240 feet. Twentieth Street is 100 feet wide between curbs, having a 70-foot roadway and two 15-foot sidewalks. This underpass is being constructed in three sections, two of which are now almost complete.

Since the railroad tracks have been elevated as high as 14 feet in places, it has been necessary for the Louisville & Nashville Railroad practically to reconstruct its passenger and freight terminal at Twentieth Street. Where passengers have been entering trains on a street level heretofore, they will in future enter a subway and climb a set of stairs to the

new elevated track level. Freight elevators from street to track levels were installed by the Otis Elevator Company. The Weaver Construction Co., Bir-



Elevated Tracks on the 14-Foot Embankment of the Alabama Great Southern

mingham,, constructed retaining walls necessary to hold the fill-in dirt for the elevated tracks. Approximately 8000

feet of track will have been elevated upon completion of the huge project.

The Twenty-second Street viaduct, first unit to be completed was constructed by Millsap & Parker, Birmingham.

Supervision of the entire construction



Reinforcing Steel Set-up for Louisville & Nashville Retaining Wall

work is under a commission composed of representatives of the railroads and the city engineer's office: A. J. Hawkins, city engineer, Ed Wise, Jr., representing the Louisville & Nashville Railroad and B. Herman of the Southern Railway System.

When completed, the project will give Birmingham seven major downtown grade-crossing eliminators and completely solve the city's downtown grade-crossing problem.



Looking West From Twenty-First Street Viaduct

Tracks at left are elevated and capable of carrying train traffic. Tracks at right are in process of being elevated. Tracks in center have not yet been raised

Sewage Disposal *for* Spartanburg

and Environs

THE Spartanburg Metropolitan District is an area created by an act of the State Legislature to better the sanitary conditions in the environs of Spartanburg, S. C. Untreated sewage was being discharged regularly into nearby streams by the city and by industrial villages, resulting in a high degree of pollution and creating a nuisance. The district covers 34 square miles, including the seven-square-mile area of the city of Spartanburg, and is governed by a commission of three members appointed by the Governor. This commission is empowered to build intercepting sewers along the main water courses, for concentration of sewage discharged from adjacent collection systems, and to construct and operate adequate disposal plants.

The Metropolitan District is drained by two streams, Fairforest Creek and Lawsons Fork Creek with minimum daily run-offs of 4,000,000 gallons and 12,000,000 gallons respectively.

An intercepting sewer, seven and a half miles in length, was constructed

By

HARWOOD BEEBE

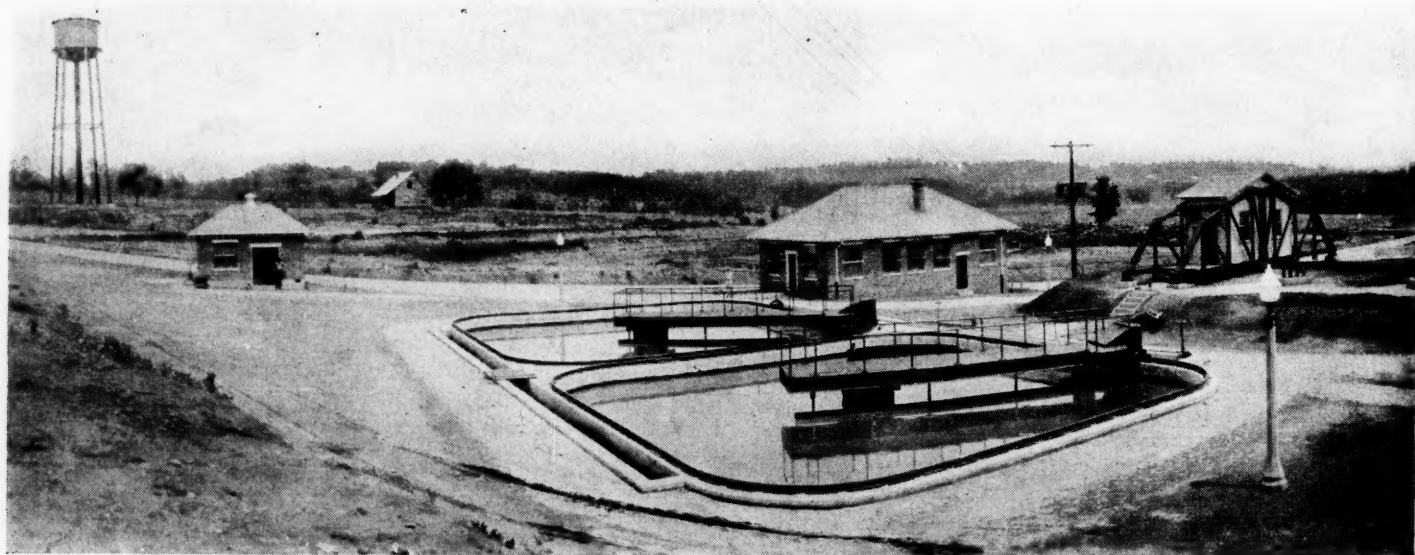
Consulting Engineer

along Fairforest Creek, utilizing pipe sizes from 12 to 36 inches. This line has a capacity of 12,000,000 g. p. d., the ultimate need of the watershed. The Lawsons Fork sewer is 11 miles long with a capacity of 5,000,000 g. d. and was constructed of pipe in sizes from 2 to 27 inches. A \$1,000,000 bond issue was provided for the purpose of development.

The location of these intercepting sewers was necessarily near the high water lines of the streams. Possible grades were very flat. On the lower reaches of both sewers it was necessary

to reduce to an .08 per cent slope. In many instances, where transverse ravines were encountered, trestles of cast iron pipe on concrete bents were built. One of these trestles, of 27-inch pipe and 955 feet in length, is possibly the largest structure of its kind in the South. Vitrified clay pipe was used throughout, except on trestles and at points where depth of ditch was excessive for the normal strength of vitrified pipe. At these points, cast iron pipe of ample strength in each case was used. Two inverted siphons were utilized to cross and re-cross Lawsons Fork Creek, the primary purpose being to avoid very rough territory, but at the same time they served to pick up sewage on the opposite side of the stream. These siphons are of the twin-pipe type and are charged by a flush tank.

The Fairforest disposal plant is designed to treat 3,000,000 gallons of sewage daily with a peak capacity for a 50 per cent overload. It consists of a screen chamber equipped with mechanically operated bar screens and so constructed



A Panoramic View of New Sewage Disposal Plant

as automatically to by-pass in case of stoppage; an 18-inch Venturi meter with register in the operating house; twin clarifiers of the traction type which provide a two-hour retention period; two mechanically operated sludge digesters of two-cubic-foot capacity per capita, with gas collectors and heating coils; four dosing chambers which operate in pairs; stone filter beds with a 300,000-gallon per acre foot daily capacity; a final clarifier of the tractor type which provides an hour and a half retention period; and six sludge beds with one-half square foot area per capita. One chlorinator is placed at the screen chamber, another just ahead of the dosing siphons and a third on the effluent line just beyond the final clarifier.

The operating house consists of an office, a fully equipped laboratory, sludge pump room and shower baths for the operators. The gas heating unit and circulating pump, as well as the gas meters, are located in the pump room. The operating house contains power panels and controls for the entire plant. A deep well and a 50,000-gallon elevated tank constitutes the plant water supply system. The grounds are adequately lighted. This plant operates by gravity throughout, pumping of sludge being the only essential. All mechanical equipment for the Fairforest plant was manufactured by the Dorr Company, New York, with exception of the dosing siphons, which were furnished by the Pacific Flush Tank Company, Chicago and New York.

The Lawsons Fork disposal plant is designed to treat 1,500,000 gallons of sewage daily. It consists of mechanical screens, Venturi meter, duplicate settling basins with sludge collectors of the Link-Belt type, duplicate sludge digestors,

four sludge beds and operating house. No trickling filters are provided in this case as the size of the stream is sufficient to furnish ample dilution for the effluent at all times.

Chlorination is provided at the screen chamber and on the effluent line. Retention periods and per capita capacities are the same as for the Fairforest plant. Gas collected from the digestion tanks is used for heating the digestors in cold weather. Screen and clarifier equipment was manufactured by the Link-Belt Company, Philadelphia, and the digester equipment by the Hardinge Company, York, Pa. Fresh water is available through hose connections at all points of the plant, being supplied by a deep well and from an elevated tank.

Intercepting sewers were constructed by the Fiske-Carter Construction Company, Spartanburg, at a total cost of \$507,500. Disposal plants were built by the McClelland Company, Charlotte, N. C., at a total cost of \$402,000.

Mechanical equipment at the Lawsons Fork plant was furnished by the Link-Belt Company and the Hardinge Company. Elevated tanks for both plants were furnished by the Chicago Bridge & Iron Works, Chicago, Ill. Chlorinators were furnished by Wallace & Tiernan Company, Newark, N. J., and Venturi meters by the Builders Iron Foundry, Providence, R. I.

The design and supervision of construction was by the Harwood Beebe Company, municipal and civil engineers, Spartanburg, who associated Morris Knowles Inc., Pittsburgh, with them on the project. E. R. Justice of the Harwood Beebe Company was in direct charge of pipe line construction and G. W. White of the same organization was in charge of plant construction.

Ask Bids for Mill Extensions

Lyman, S. C.—Bids for construction of a concrete warehouse and for an extension to the bleach house of the Lyman plant of the Pacific Mills, of Lawrence, Mass., will be opened September 12 in the office of Lockwood Greene Engineers, Inc., Spartanburg, S. C. The erection of the warehouse, with 100,000 square feet of floor space and the bleach house extension totaling 12,000 square feet of floor space, will permit the installation of 8 print machines and increase the capacity of the bleachery and dye house by 50 per cent. This is in accord with original plans of the Pacific Mills for the Lyman plant which contemplated all operations incidental to the spinning, weaving and processing of cotton. In addition to new construction and equipment, important changes will be made in the present space and equipment to permit efficient and coordinated operation of all departments. The new facilities are expected to be in full operation by January 1, 1932, when approximately 200 additional operatives will be engaged. C. B. Hayes is superintendent of the Lyman plant.

\$565,000 Reclamation Project

Orange, Tex.—At a public hearing by the County Commissioners Court, Orange County Reclamation and Conservation District was formed as a preliminary to calling an election on a bond issue of \$565,000 for drainage. The following supervisors will have general charge over the affairs of the district: Judge DeWitt C. Bennett of Orange, C. K. Akers of Duncan's Woods and W. T. Dunn, Mauriceville.



Recently Placed in Operation at Spartanburg, S. C.

LETTERS FROM OUR READERS

"Live-at-Home" Farmers

Better Off

The Commercial National Bank
High Point, N. C.

Editor Manufacturers Record:

There are no large cotton farmers in this immediate territory. A great many farmers raise small crops of tobacco. Throughout this section there are small farmers who operate on the "live-at-home" basis and as a rule they are not much in debt.

Crops are unusually good this year, and while prices on all farm products are low, the farmer did well. He did not have as much expense, at least on fertilizers and so on, and will naturally get considerable revenue from his efforts.

I think it safe to say that the farmers throughout this section are in better financial condition than they were a year ago.

J. ELWOOD COX, President.

Profit As the Keystone

King's Economical Drug Store (Inc.)
Tampa, Fla.

Editor Manufacturers Record:

The one and only thing that will stop this nation from plunging over the abyss is the profit on the last transaction. This profit built every schoolhouse and church; paved every village and city street; put down every water main; put in every sewer system; built every home, every barn, every fence. The profit on the last transaction sent every boy and girl to college; inspired every man, woman and child with ambition; it fought and won every war; supplied every necessity, provided every luxury.

As long as the profit on the last transaction remained in the community where it was made, it created employment; it produced every expansion in human activity; plotted and developed every subdivision and continually increased the value of every foot of ground.

The drawing of the profits of human endeavor in America to be given in billions to foreigners must stop. These profits must be left in the communities, if we are to survive. This, in my opinion, constitutes the problem of your country and mine.

W. E. LAWRENCE, President.

Suggests Lower Railroad Rates and Wages

Tazewell Farm Bureau, Inc.,
North Tazewell, Va.

Editor Manufacturers Record:

Railroads must face the problem of reducing operating expenses and lowering the cost of transportation in proportion to the lowered returns to all other industries. Based on this view we have

written in substance the following to the Interstate Commerce Commission:

"A reduction in freight and passenger rates, not an increase, will stimulate shipping instead of driving it away. A reduction in railroad wages proportionate to the enormous decline in the cost of food and living expenses is necessary. During and after the war wages were more than doubled as food prices advanced. Now food prices are much lower than before the war and it is only right that wages should come down.

"The railroads are receiving for their transportation service a much larger percentage of the market returns for farm products than they received before the war. The present ratio of freight to market value of farm products is now two to four times what it was five years ago.

"All other industry has to meet competitive conditions. If the railroads have made shipping prohibitive through excessive rates, and allowed the trucks and buses to take their business, let them get busy and find a way to meet the new competition with lower rates. Trucks and buses are rendering the country a great service, and through taxes, they pay for their use of the roads.

"We ask that freight rates be lowered, not raised, because of ultimate benefit to the railroads and because lower rates are a necessity to the economic existence of a large percentage of our other industries."

R. R. WALL, Secretary-Treasurer.

Opposes Gasoline Tax Diversion

Chamber of Commerce

Roanoke, Va.

Editor Manufacturers Record:

I wish to commend your position in the editorial on "Gasoline Tax Diversion" with reference to the backward step which the South would take if it declared a "road building holiday."

There recently has been considerable comment in Virginia on the question of increasing our gas tax from five to six cents and the diversion of some of this tax to purposes other than road building. The directors of the Chamber of Commerce at a recent meeting went on record therefore as follows:

Oppose any increase in the present gas tax.

Oppose the diversion, directly or indirectly, of the gas tax to any purpose other than the construction of roads.

Oppose any reduction in the automobile license tax which will hamper the maintenance of a constantly increasing State highway system.

Under our laws, all of the gas tax now goes to highway construction, while our automobile license tax goes to highway maintenance.

It shall be the purpose of this chamber to promote the above views as far as possible throughout Virginia.

B. F. MOOMAW, Secretary.

Indications of Better Business

GOVERNORS:

- D. A. CURRIE,
Vice-Pres. and Gen. Manager
Erie Foundry Co.
- A. M. DOLL,
Pres. and Treasurer Lovell
Manufacturing Co.
- H. L. R. EMMET,
Manager General Electric Co.
Erie Works
- ELY GRISWOLD,
Vice-President Griswold
Mfg. Company
- OTTO G. HITCHCOCK,
Vice-Pres. and Gen. Manager
Hays Mfg. Co.
- ALEX. JARECKI,
President Jarecki Mfg. Co.
- E. E. KNOBLOCH,
Treasurer Union Iron Works
- W. L. LITTLE,
Manager Bucyrus-Erie Co.,
Erie Works
- EDWARD C. MOORE,
Vice-President and Treasurer
Erie City Iron Works
- H. W. SIMS,
Treasurer,
The Sims Co.
- R. P. WRIGHT,
Secretary-Treasurer
Reed Mfg. Co.
- R. L. YATES,
Vice-Pres. and Gen. Manager
Skinner Engine Co.

OFFICERS:

- D. A. CURRIE, President
- O. G. HITCHCOCK, Vice-President
- A. M. DOLL, Treasurer
- M. W. EISMANN, Traffic Manager
- DANA E. JONES, Secretary and Manager

Manufacturers Association of Erie,
Erie, Pa.

Editor Manufacturers Record:

One of our members has sent me from your August 20 issue, the article entitled "Signs of Better Business." This is the most cheerful information we have received this summer from any section of the country. It is evidently a fixed feature of your publication.

We would be glad to distribute 75 to 100 copies of these in connection with our regular bulletin. You might find other associations and business organizations throughout the country quite willing to do the same thing.

We have a feeling that business is on the upward trend. Such information as you have given is a clear indication that the signs do point toward better business.

DANA E. JONES, Manager.

IRON, STEEL AND METAL MARKET

Steel Buying Is Lighter, and Production Lower

Pittsburgh, September 7—[Special.]—Last week was a disappointing one to the steel trade as buying was even a trifle lighter than formerly and production slipped to the lowest rate in this whole decline, though by only a small margin. Since late in July the weekly variations in steel production have been such as would be insignificant in ordinary times, but of late everything has been watched very closely for possible signs of a trend for the future. Steel ingot production last week was at barely 30 per cent of capacity, against 34 per cent officially reported for July and 32 per cent estimated for August, pending issuance of the regular report.

Disappointment was due to the fact that right along distinct September improvement had been predicted and one might expect a little forerunner of this as August came to a close. From time to time these predictions of September improvement have been toned down as to extent, and now there is a disposition to postpone the time a little, and make it October. Judgment had best be suspended, however, for all buyers have been making their purchases with particular closeness and as this week's holiday interrupts consumption, the lighter buying recently may perhaps have been due to that influence.

As a matter of fact the steel making industry is not particularly interested in this matter of seasonal improvement, for if a merely seasonal improvement occurred it could not last long, being subject to the usual decrease in the closing weeks of the year. Thus the total tonnage of neither this quarter nor next would be greatly increased. What the steel trade needs is general business improvement.

Finished steel prices continue to hold with great firmness, making one favorable feature. From the standpoint of profits all steel prices are too low, as with such a light operation the overhead becomes very heavy per ton and increases cost. In sheets, strips and wire products present prices, although representing advances just recently in effect, would not provide profits even with a considerably heavier operation than there is now, and attempts to make further advances for fourth quarter are expected.

The fabricated structural steel trade now shows a favorable turn. Shipments of the fabricating shops decreased after

June, 1930, to and including May of this year, there being occasional slight increases. June then showed a decided increase and July, just reported upon, a further increase. July was 23 per cent over May and the best month since last November. It was at just two-thirds the average monthly rate of 1929, while other lines of steel consumption as a rule are off much more than one-third from 1929. Total steel production in July was 41 per cent of the average rate in 1929, while automobile production was at 48½ per cent.

There was, however, a material decrease in automobile production from July to August when in the past there was on an average an increase, ascribed to new models. This year few new models were brought out. September is expected to show a decrease from August. Hopes are expressed of an increase in October, although that would be distinctly out of season.

Even now finished steel production is at over 300,000 net tons a week, no small tonnage, and when railroad and some other requirements are almost nothing it is seen that some steel consuming lines are doing at least moderately well. The percentage rate of operation of the steel industry seems very low but that is partly on account of the large capacity, obviously far in excess of the requirements of the country in ordinary times and indeed somewhat in excess of requirements in the best time there has been in the past.

The scrap market stays in balance without any material price changes. Consumers are buying very little, and little scrap is coming out. In many cases it does not pay to gather and ship scrap. As demand has been very light, prices simply declined until that situation was created.

Some Demand for Wire Products From Agricultural Sections

Birmingham, Ala., September 7—[Special.]—Seasonal change for the better in iron and steel is expected and hope is aroused by activity in a few directions—in sheets, structural and wire products. A little sheet is being exported and there is steady inquiry which promises to increase in volume. The wire and wire products demand, fencing and nails, comes from the agricultural sections and warrants better operation of works than for some time.

Cotton ties are moving in quantity with prospects of a greater tonnage being required this season than had been anticipated. There is reluctance in stating base price on cotton ties, keen competition by foreign and other manufacturers being intimated.

Several specifications in sight, on which bids will be opened during the month, will call for a considerable tonnage of steel, bridge and structural. Prominent is a large highway-railroad bridge near New Orleans which will use nearly 60,000 tons of steel in various shapes. Additions to industrial plants throughout the South are also on the list, calling for tonnages ranging from 250 tons upwards.

Structural fabricating shops are making five days a week still, though forces are not up to the full complement. The sheet mills of the district are producing at about 50 per cent capacity and there are a few shipments out of the country, export business. Reinforcing steel bars are in fair demand.

The rail mill is silent although there were reports that two or more specifications had come into sight and that there would be an early placing of the business. The Ensley Works of the Tennessee Coal, Iron & Railroad Company, including rail mill and nine open hearth furnaces and six blast furnaces, now down with the exception of one blast furnace, can be started up again within a fortnight. Labor has not scattered to any extent; there is a patient waiting for new business to be announced and preparations to start. Out of eight open hearth furnaces at the Fairfield Works, four are producing ingots and of the two large blast furnaces one is making basic iron. Several of the mills are active, more or less. The Gulf States Steel Company, out of six open hearth furnaces is operating two and at times three. Steel mill operations of the district, based on ingot production, is estimated at 28 to 30 per cent capacity.

The plate fabricating shops are still anticipating new business, especially from the West, government and other projects to require no small amount of plate. The tonnage reported several weeks ago for use in California has been delivered.

Mills on fencing or wire and wire products, nails, staples, etc., have been shipping a little more actively recently, agricultural sections having come into the market. This business, however, is not expected to be very extensive.

Coal production in Alabama for the year will be below 16,000,000 tons, it is

estimated now. Coke production is a little greater than 50 per cent capacity.

Scrap iron and steel is still weak with prices low.

Portland cement mills of the district are producing at 60 per cent capacity. Heavy stocks are being carried. Expectations are that shipments will continue through the remainder of the year. Special quick-drying cement, manufactured at Demopolis, Ala., is finding steady demand and that plant is operating almost to capacity.

The Warrior River barge line of the Inland Waterways Corporation has freight booked down stream for several weeks ahead, profit now being made. New barges are being added to the service.

PIG IRON

No. 2 foundry, 1.75 to 2.25 per cent silicon, \$12.00 to \$13.00; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$12.50 to \$13.50; iron of 2.75 to 3.25 per cent silicon, \$13.00 to \$14.00; iron of 3.25 to 3.75 per cent silicon, \$14.50 to \$15.00.

OLD MATERIAL

Steel rails	\$10.00 to	\$11.00
Steel axles	11.50 to	12.00
Iron axles	11.50 to	12.00
Heavy melting steel.....	7.50 to	8.50
No. 1 cast.....	9.00 to	10.00
Stove plate	7.00 to	8.00
No. 1 R. R. wrought.....	8.00 to	8.50
Car wheels	8.00 to	9.00
Tramcar wheels	8.50 to	9.00
Machine turnings	4.50 to	5.00
Cast-iron borings	4.50 to	5.00
Rails for re-rolling.....	10.25 to	11.00

Metals Steady in Price

New York, September 7—[Special.]—Steadiness in price has been the chief condition of the metals over the past week. Tin has been the exception, having fallen somewhat at the middle of the week when August statistics were interpreted unfavorably. Copper appeared to be tightening in price on some days, with producers more reserved in selling below 7½¢, though actually the price did not get anywhere. Lead and zinc have both been unchanged in price. Silver has fluctuated but narrowly and minor metal prices were unchanged.

Lead was the most active of the metals, the briskness of purchasing of the preceding week having been carried over to the past week. The corrodors, who make lead oxide for the paint trade and other industries, were the best purchasers. They bought liberally because of expectancy of a brisk demand for paint in the fall and because they believed that lead prices were destined to go higher. Makers of batteries, foil, cables, sheets and pipe, as well as ammunition were also active purchasers.

The industrial outlook generally, and as it concerns the metals, still remains somewhat dubious. Some observers of the steel industry profess to see signs of the usual fall improvement, while others see but little on the horizon. It is

estimated that production of automobiles in August was 180,000 units and the prediction for September is 160,000 cars and trucks, which compares with 223,181 for July.

The Governmental building program is in full swing, which is a particular boon to the steel industry. In a slighter degree, producers of the non-ferrous metals will benefit. The many new post offices which are to be constructed will consume many tons of non-ferrous metals such as copper and lead, and possibly zinc for utilitarian and artistic purposes. Extensions of public utility lines are missing from the industrial news of the day, a development which had been such an important outlet for copper in 1929.

Consumption of tin is at a rather low ebb. Production of tin plate in August was 2,500,000 boxes, the lowest for an August since 1924 when production had been 2,000,000 boxes. In August, 1921, production had been negligible. The use of tin in packing foods this season has been somewhat disappointing. The pea pack, the major vegetable, fell far short of the 1930 pack. The corn pack may be 8 per cent larger than last year. The tomato crop is said to be proving inferior to calculations. The pack of several California fruits, notably peaches, was rather curtailed.

Copper demand has been poor. Export sales in August were 16,000 tons, which is somewhat better than for July though way below the large June total of 77,000 tons. At the end of this week copper statistics for August will have been issued and are expected to be unfavorable, with another sharp increase in surplus stocks. Here and there curtailment of production is made, such as the shutting down of one of Anaconda's smaller

mines, but the curtailment is evidently too slow. It is possible that copper interests will hold another curtailment conference this month, now that the vacation season is over, but predictions for its outcome are not sanguine.

As further curtailment seems less likely on a large enough scale, more attention is being given to the agitation for a duty on copper. It is pointed out that Chile can lay down copper at New York at a cost under 5½¢; Africa, under 7 cents. The most favorably-situated American producers find costs ranging between 7 and 9 cents per pound, while some of the leading producers in Arizona meet with costs of over 10 cents a pound. That state produces 40 per cent of the copper mined in the United States. Some are asking for a copper duty as high as 6 cents. Copper and tin are the only major base metals which carry no duty, but there is an important difference in the status of these two metals. There is no tin manufacture in the United States and hence no need of a duty.

August tin statistics revealed that the world's visible supply declined 1200 tons, including the carryover in the East. Straits tin shipments for the month were slightly over 6000 tons; it is predicted they will be 6500 tons in September. The figures are a trifle disappointing in view of the scheme to curtail production which has been in effect since early this year.

Lead and zinc ore prices in the tri-State district of Oklahoma, Missouri and Kansas are unchanged. It is said that most of the present production of zinc ore comes from mines which had been considered practically exhausted, mines which are being worked by the unemployed in order to eke out a livelihood.



All-Welded Deck Barge

The Charleston Dry Dock & Machine Co., Charleston, S. C., recently delivered to the U. S. Engineer Department, Wilmington, N. C., an all-welded oil or deck barge, 80 by 26 by 6 feet. The barge was built by the R. F. Smith System of welding, and is of 5/16-inch plates with 6-inch flat bar longitudinals spaced approximately two feet apart. A center line bulkhead runs the length of the barge, and with three transverse bulkheads the barge is made into six separate compartments. Two 12-inch longitudinal girders run the entire barge length, and together with the center line bulkhead are designed to prevent sagging.

HIGHWAYS AND MOTOR TRANSPORT

The Gasoline Racket

That the country is gradually becoming aroused to the evils of the steady increase in gasoline tax rates is indicated by statements of men high in the oil industry, who report that payment of hundreds of thousands of dollars in gasoline tax is being evaded by "gasoline bootleggers." The August number of the Conoco Magazine, published by the Continental Oil Company, Ponca City, Okla., covers this subject in a thorough manner in its leading editorial, "Gasoline Gangsters." Because the gravity of the situation is set forth with such clarity the editorial is reprinted here, as follows:

"Not so many months ago the public gasped in astonishment when investigators revealed that organized crime was preying on the nation's pocketbook through several hundred different rackets.

"The oil men, it seemed, had nothing to fear from racketeers. They were in a position to sit back and survey the situation with calm, pious disapproval. 'The oil business is too strong for the gangsters,' they said.

"But almost over night, growing more bold with every boost in state gasoline taxes, arose a band of hoodlums as bold as the pirate chiefs of old. Today we are the target for attacks by marauders who deliberately evade taxes. They are putting law-abiding operators 'on the spot,' and because their activities encourage even more drastic increases in gasoline taxes, they are 'taking the public for a ride.'

"The Great God Greed and his willing abettor, the Almighty Dollar, bring brand new rackets and their attendant human parasites into the world in swarms. They are as dangerous and as self-evident as the grasshoppers which plagued Egypt. With millions of dollars to be made by the evasion of state taxes, it is no wonder that these gasoline gangsters do not hesitate to undermine the market structure of the oil industry.

"Every state, and the District of Columbia, now has a gasoline tax amounting to from 2 to 6 cents a gallon, to which is added in some cases a city or county tax. These taxes, taking the country as a whole, run from 10 to as high as 40 per cent of the price paid by the consumer! Everybody in the oil business knows that the taxes are both too high and misspent, but nevertheless they continue to mount.

"Briefly, the three principal avenues of evasion are: (1) Evasion by dealers through the illegal use of the farmers' exemption clause in some state laws (tractor and stationary engine), (2) evasion by dealers through the blending of kerosene and natural gasoline to form a specification motor fuel, the tax being

paid on the natural gasoline only, and (3) direct non-compliance with the law and refusal to pay the tax.

"As one editor expresses it: 'As a political sop to the farmer vote the legislatures in many states have exempted from the tax all gasoline used in tractors and other farm equipment.' Subsequently the quantity of gasoline supposedly used for agricultural purposes has increased beyond all proportion. In one state the exempted gasoline last year was practically 40 per cent of all the gasoline purchased! Evidently the gasoline racketeers have inaugurated a 'back-to-farm' movement of their own.

"In Pennsylvania, according to a recent statement by Governor Pinchot, the unpaid gasoline levies had reached the astounding total of \$5,500,000, and simply because the revenue department had allowed delinquent accounts to accumulate. Inability of state officials to enforce tax laws is therefore another important cause of tax evasion.

"It is necessary also to mention the more unscrupulous dealer who goes out

of business and establishes himself elsewhere just before it is time to collect the tax. Then there is the unidentified tank wagon which, under the cover of darkness, plies between the source of supply and the dealer. But the methods of the gasoline tax racketeer are more numerous than the stories of Sindbad the Sailor. How to defeat them and protect the honest marketer who is still 'old-fashioned' enough to value his honor is more important. The oil industry must take speedy and concerted action against its list of 'public enemies.'"

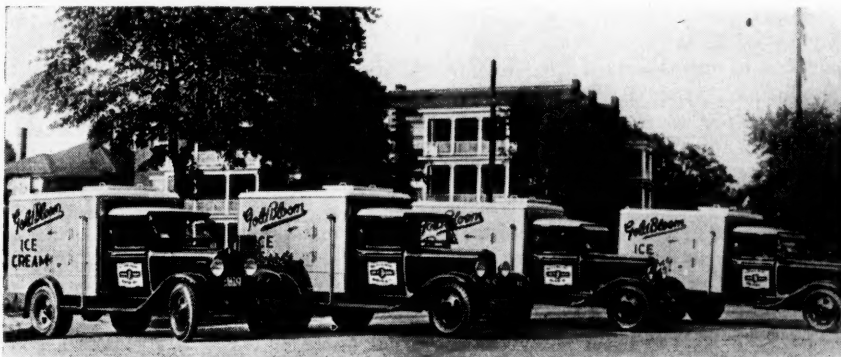
\$2,500,000 Road Bids

Columbia, S. C.—Low bids for the construction of 18 South Carolina road projects, covering a total of 240 miles, and for 10 bridge projects, approximate \$2,500,000, according to a tabulation of figures by the State Highway Department. Nine projects call for 126.634 miles of concrete to cost \$1,679,312; 5 projects, 81.181 miles of bituminous surfacing, \$425,950; sand clay, 9.706 miles, \$38,650; gravel, 7.653 miles, \$43,436; top soil, 15.026 miles, \$72,612. Total cost of the bridges will be \$186,632, and of metal slope drains, \$1880.

Refrigerator Trucks for Kentucky Firm

Four new Chevrolet trucks equipped with refrigerator bodies were recently added to the transportation department of the City Consumers Company, Paducah, Ky. They are of 1½-ton capacity, and each can carry a total of 230 gallons of ice cream. Bodies were constructed by the Anheuser-Busch Truck Body Division of Anheuser-Busch, Inc., St. Louis, in accord with patents held by the company on the automatic brine

circulation system of refrigeration. In addition to the compartment made cold by this patented ice and salt system, there is on each body a suitable compartment for storage of empty cans. Kapok is used as the insulating material. Outside paneling of the body is of three-ply veneer wood with a rust-proof body steel face, the whole being held together by means of a water-proof glue. Inside lining is of half-inch kiln dried ship-lapped cypress.

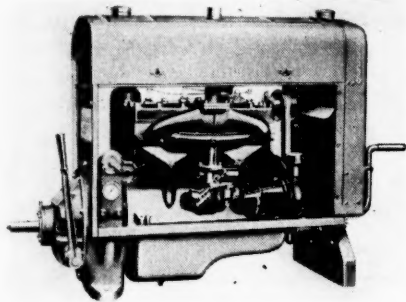


Each Truck Has a Capacity of 230 Gallons of Ice Cream

NEW AND IMPROVED EQUIPMENT

Small Internal Combustion Engines

The Waukesha Motor Company, Waukesha, Wis., manufacturers of heavy duty internal combustion engines, announce a series of two small 4-cylinder engines of 10 to 20 horsepower. With the addition of these engines—the FLJ and FKJ—known as the Agile Fours, the company enters a new industrial engine market. The engines have the standard Ricardo combustion chamber, short, stiff crank shaft separated by three unusually large bronze-backed reversible bearings; full pressure oiling, built-in governor and detachable fly-wheel housing. In addition to these



Waukesha Self-Contained Power Unit

Waukesha features, there is a large degree of flexibility in the facility for mounting accessories. The new units are particularly adapted to use in plaster and concrete mixers, golf course rollers, high pressure sprayers and to many other services where 10 to 15 horsepower is required. They are self-contained power units, easily moved, and may be put to a number of handy uses.

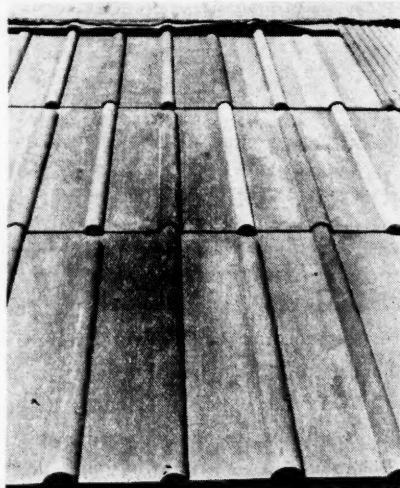
Pneumatic Lug Tractor Tire

A pneumatic lug rubber tractor tire is announced by the Goodyear Tire & Rubber Company, Akron, O., who recommend it as of interest to users of tractors in industry, road building and maintenance and in agriculture. The new product is designed for tractor speeds, tractor weights and stresses, and for tractor requirements of surefootedness and drawbar pull under various conditions. Its carcass is especially designed and constructed for low pressures recommended, with large rubber lugs placed diagonally across the tractive surface of

the tire. Goodyear pneumatic lug tractor tires are made in four sizes: 36 by 6, 38 by 7, 40 by 8 and 42 by 9. Wheels for changeovers of present tractors are available.

Cast Iron Roofing Plates

The United States Pipe & Foundry Company, Burlington, N. J., has developed a cast iron roofing material, designed particularly for industrial buildings and to meet a demand for quick and simple installation. The new product is made in plates 2 feet by 4 feet 4 inches in size, with $\frac{3}{16}$ -inch thickness, and is laid directly on the roof purlins and joined together by cast iron cap plates which in turn are fastened to the roof purlins by key lugs, thus making the roof a complete interlocked system, integral in itself and integral with the roof trusses to which the purlins are attached. The roof plate is made flat



"Usicast" Roof

with flanged sides to insure strength, having a center hood formed at the lower edge and extending upward to the top, where it merges with the flat bed of the plate. The cap plate is semi-circular in shape with a lug extending downward near the lower end and with a slot or keyway to receive the key or locking device. The ridge cap plate is locked to the purlins with two keys. All assembly is done from the outside except for keying the last ridge plate. The new material is known as "Usicast" roof plate and is described as having the advantages of permanence, fireproof and windproof qualities, elasticity, attractive appearance and intrinsically valuable as scrap.

Grinding Wheels and Points

The Carborundum Company, Niagara Falls, N. Y., announces a new production set of mounted wheels and points for the general run of grinding jobs on various types of portable grinders. In this set the user is assured he will find all necessary practical shapes and sizes, and in the right grits and grades, in both mounted wheels and points to adequately meet requirements.

Grits and gradings of the wheels and points assure fast, clean cutting, adequate stock removal and a superior finish, it is said, on all metals and non-metals, except aluminum, solder and tin.



A Product of the Carborundum Company

The wheels and points are made of Aloxite brand aluminum oxide, mounted to run true and cut with speed, keeping sharp with little dressing while holding their shape and giving a uniform finish. Spindles are copper-coated, a new feature designed to assure more secure mounting with a rust-proof spindle. Two rubber bonded polishing wheels are included in the set for burnishing surfaces on metals without loading or filling, and in each set there is a Carborundum brand dressing stick for general dressing or for changing the shapes of the wheels to meet special conditions.

All plain wheel shapes have a relieved end which permits grinding flat surfaces and blind holes, while two of the shapes may be used in die grinding, in forming teeth of special cutters and for sharpening small circular tools. The set is furnished in a box container.

The Treasury Department, Washington, Jas. A. Wetmore, Acting Supervising Architect, commissioned J. W. Smith & Associates, Monroe, La., to prepare plans and specifications for a \$390,000 post office and court house building to be erected in Monroe.

CONSTRUCTION DEPARTMENT and NEW ENTERPRISES

Covering the initial announcements of new undertakings with additional information about enterprises previously mentioned. The date at the end of an item indicates preliminary facts were given in a previous issue.

When writing to a new firm or corporation the name of at least one of the incorporators should be placed on the envelope to expedite its handling by the local postoffice. Mail may be delayed unless complete address is given.

Building and Construction Proposed and Contracts Awarded; Manufacturing, Mining, Power, and Land Developments; Public Works; Transportation; Communication; Financial Enterprises; New Business Opportunities Reported in the Sixteen Southern States.

The Daily Construction Bulletin of the Manufacturers Record gives each business day advance news published in this weekly review. It is invaluable to those requiring prompt information. Subscription price \$40.00 a year.

Airports, Airplane Plants, Etc.

Ala., Maxwell Field—Following have taken out plans and specifications for radio bldg., bids opened Sept. 16: T. M. Corrie, Box 441; Perry & McDonald, 317 Dexter Ave.; Algeron Blair, First Natl. Bk. Bldg.; Hehle Bros., 8th Floor Shepherd Bldg.; Samford Bros., Inc., 301 Washington Ave.; E. G. Bunch, 418 Mildred St.; E. S. Hugger & Co., 205 Parallel St.; Jeffers Realty Co., 20 Commerce St.; all Montgomery; Crane Co., 1225 Eye St., Washington, D. C.; Norwood Griffin Co., Bona Allen Bldg., Atlanta, Ga.; W. E. Tucker, Camp Hill; W. L. Kistler, Alexander City; H. H. Brown, Dothan; A. R. Means, 135 E. Bay St., Jacksonville, Fla.; A. J. Honeycutt Co., 2512 6th Court, N. Birmingham; Roach-Leontour Construction Co., 1st Natl. Life Bldg., St. Louis, Mo.; McPhillips Mfg. Co., Ft. of Lawrence St., Mobile; Wm. A. Hansell, 737 Woodland Ave., S. E., Atlanta, Ga.; D. T. Underwood Const. Co., Pioneer Bldg., Birmingham; Batson-Cook Co., West Point, Ga.; Johns-Manville Co., Locust at 17th St., St. Louis, Mo.; All States Construction Co., Inc., 305 Bisbee Bldg., Jacksonville, Fla.; L. J. Lehotay, Opelika; J. R. Green Plastering Co., Columbus, Ga. 8-27

Ky., Louisville—Inter-Departmental Committee on Civil Airways, Washington, D. C., authorized lighted airway between Louisville, Ky., and Dallas, Tex., via Nashville, Tenn., Little Rock and Texarkana, Ark.; Commerce Dept. Aeronautics Branch will begin survey for beacons in next 30 days.

La., Barksdale Field, Shreveport—Office of Constructing Q. M., George E. Lamb, receives bids Sept. 18 for construction gas distributing system, complete, and 6-in. compound water meter; bids opened Sept. 14 for hangars, wing operations building, air corps warehouse and air corps assembly shop. 9-3

N. C., Durham—Frank Pierson, Sec., Chamber of Commerce, will probably have airport plans submitted this week before Public Works & Finance Committee, for approval; H. W. Kueffner, City Engr.; est. cost of grading, clearing and draining field, \$15,000; total cost \$25,000. 5-30

Tex., Kingsville—Allen Furniture Co., erecting building E. King Ave., to be leased to Dept. of Commerce, Aviation Sec., equipped with machine shops.

Va., Langley Field—Office of Constructing Q. M., E. C. Hayden, 2nd Lieut., Q. M. C., receives bids Sept. 23 for 50,000 gal. conc. fuel oil tank and installation of boiler plants and outside distribution system for hangar area.

Va., Norfolk—Ben Epstein, 240 W. 36th St., Pres., Grand Central Air Terminals, plans improving air field; will be used as landing field by Luddington Lines, operating airplane passenger service between Norfolk and Washington; construct 2 runways, 300 ft. wide, 3500 ft. long; enlarge present field of 53 acres to 200 acres.

Va., Tenn., Bristol—Chamber of Commerce Committee, W. A. Hiddleston, Chrmn., interested in installing airport lighting facilities.

Bridges, Culverts and Viaducts

Proposed Construction

Ky., Newport—Chesapeake & Ohio Ry. Co., C. W. Johns, Ch. Engr., Richmond, Va., authorized overhead crossing, Monmouth St.; \$710,700.

La., New Orleans—Following additional firms received plans on \$19,000,000 bridge for New Orleans Public Belt R. R., Frank H. Joubert, Sec.-Treas.-Gen. Mgr., Municipal Bldg., bids due Sept. 15:

Cont. 3, substructure of main bridge—Frederick Snare Corp., 114 Liberty St., New York; Peter F. Connolly Co., Fort Green Park, Myrtle Ave., Brooklyn, N. Y.; Laclede Steel Co., Arcade Bldg., St. Louis, Mo.; Globe Construction Co., 4646 Thalia St.; Jones & Laughlin Steel Corp., P. O. Box 66, and United States Fidelity & Guaranty Co., 1601 Canal Bank Bldg., all New Orleans; Kilby Car & Foundry Co., Anniston, Ala.; Stevens Bros. and Miller-Hutchison Co., P. O. Box 728, Alexandria, La.;

Cont. 4, superstructure of main bridge—Laclede Steel Co.; Jones & Laughlin Steel Corp., and Merritt, Chapman & Williams Corp., 833 Howard Ave., New Orleans;

Cont. 5, substructure of approaches—Frederick Snare Corp.; Laclede Steel Co.; Frank Parrott, Dallas, Tex.; Jones & Laughlin Steel Corp.; Orleans Dredging Co., 747 Canal Bank Bldg., New Orleans; Frazier-Davis Construction Co., Arcade Bldg., St. Louis, Mo.; Globe Construction Co.; P. Olivier & Son, Inc., 114 Bilbo St., Lake Charles, La.;

Cont. 6, superstructure of approaches—R. C. Mahon Co., 8650 Mt. Elliott St., Detroit, Mich.; G. A. Johnson, care Wisconsin Bridge & Iron Co., 1748 N. Broad St., New Orleans; Laclede Steel Co.; Ross Meehan Foundry Co., Chattanooga, Tenn.;

Cont. 6, superstructure of approaches—Jones & Laughlin Steel Corp.; Merritt, Chapman & Williams Corp. Modjeski, Masters & Chase, Engrs., 121 E. 34th St., New York. 8-27

Maryland—State Roads Comsn., L. H. Stuart, Sec., Baltimore, opens bids Sept. 22 for conc. girder bridge (1136 ft. between abutments), on conc. pile substructure, including all bascule piers, operator's house, approaches, etc., exclusive of bascule span superstructure, Bohemia River, road from Chesapeake City to Cecilton, Ce-108-27, Cecil County.

Maryland—State Roads Comsn., L. H. Stuart, Sec., Baltimore, opens bids Sept. 24 for conc. girder bridge (463 ft. between abutments), on conc. pile substructure, including all bascule piers, operator's house, approaches, etc., exclusive of bascule span superstructure, over Marshyhope Creek, on road from Rhodesdale to Eldorado, Brookview, D-79-17, Dorchester County.

Maryland—State Roads Comsn., L. H. Stuart, Sec., Baltimore, opens bids Sept. 15 for struc. steel superstructure for bridge over Deer Creek, Hickory to Ady road, H-126-44, Harford County.

Md., Baltimore—City, H. L. Lucke, City Bridge Engr., Municipal Bldg., has low bid from Marocco Construction Co., 231 S. Exeter St., at \$98,921, for Lafayette Ave. bridge over Pennsylvania R. R., in connection with railroad electrification; Whitman, Requaardt & Smith, Engrs., Baltimore Trust Bldg. 8-27

Mississippi—State Highway Comsn., C. M.

Williamson, Director, Jackson, soon let contract for \$10,000 bridge between Natchez and Kingston to replace structure over St. Catherine's Creek.

North Carolina—See Roads, Streets and Paving.

Texas—State Highway Comsn. receives bids for 16 bridge projects. See Roads, Streets and Paving.

Tex., Houston—City, Office of City Secretary, opens bids Sept. 23 for rein. conc. bridge, 75th St., over Brays Bayou; J. M. Nagle, City Engr.

Virginia—State Dept. of Highways receives bids for 4 bridges. See Roads, Streets and Paving.

Virginia—See Roads, Streets and Paving.

West Virginia—State Road Comsn. has low bids for 2 bridges. See Roads, Streets and Paving.

Contracts Awarded

Fla., St. Petersburg—City, Cramer B. Potter, Dir. Public Works, let contract to Charles E. Lund & Associates, Inc., 115 25th Ave., N. E., for completing Snell Isle bridge over Coffee Pot Bayou, at approx. \$25,990. 8-27

Md., Baltimore—Pennsylvania R. R., W. B. Wood, Engineer in Charge Baltimore Improvements, Pennsylvania Station, Baltimore, let contract to Arundel Corp., Pier 2, Pratt St., for 3 bridges, Gay St.; Preston and Wolfe St.; Washington and Biddle St., and retaining walls along right of way and relocating tracks at Ellsworth St. 8-27

Mo., Branson—Fred Luttjohann, Topeka, Kans., took over contract from H. H. Carrothers, 6808 E. 39th St., Kansas City, for bridge, Highway 65, over White River, for State Highway Comsn., T. H. Cutler, Ch. Engr., Jefferson City. 8-6

Texas—Alamo Iron Works, San Antonio, has contract for 100 tons rein. steel for bridges for State Highway Comsn., Austin, Calhoun, Jackson and Matagorda Counties; Monarch Engineering Co., Gen. Contr., San Antonio. (See Roads, Streets and Paving. 8-13.)

Canning and Packing Plants

Fla., Davenport—Holly Hill Grove & Fruit Co. let contract to Florida Citrus Mch. Co. for packing plant; install complete Brodrex system. 9-3

Fla., Fort Lauderdale—Broward Citrus Growers Assn., incorporated; Frank Stirling, Flamingo Groves; C. E. Velle, Douglas Groves; leased Manuel-Weidner packing house on Seaboard R. R.; install machinery for grading, washing and wrapping oranges; Exchange Packing Co., Tampa, Mch. Contrs.

Fla., Palmetto—Manasota Packing Co., incorporated; G. F. Beckler.

Coal Mines and Coke Ovens

Ark., Clarksville—Clark Coal Co., incorporated; N. R. Clark; operate coal mines in Johnson county.

Cotton Compresses and Gins

Mo., Steele—Farmers Gin Co., incorporated; E. T. Burton, H. S. Taylor.

Drainage, Dredging and Irrigation

Florida—U. S. Engr. Office, Florida Theatre Bldg., Jacksonville, reported, opens bids Sept. 15 for approx. 35,000 lin. ft. levee and navigation channel, and placing in levee 2-179,000 cu. yd. material, dragline section, or 3,064,000 cu. yd. hydraulic section, including necessary drainage structures, between Diddon Island Drainage Dist. pumphouse No. 1, near Moore Haven and extending toward Clewiston.

La., Baton Rouge—East Baton Rouge Police Jury has low bid from D. M. Easley, Wilson, Ark., at 8 cents per cu. yd., for drainage canal from Comite River to Bauman's Bayou, Fifth Ward, 40,000 cu. yd. 8-13

Maryland—U. S. Engr. Office, Custom House, Baltimore, has low bid from Arundel Corp., Pier 2, Pratt St., at 9.4 cents per cu. yd., for dredging 1,050,600 cu. yd. entrance to Craighill Section of channel leading to Baltimore. 8-20

Md., Chesapeake City—U. S. Engr. Office, Wilmington, Del., has low bid from American Dredging Co., 308 Chestnut St., Philadelphia, Pa., at 25 cents cu. yd., for 95,000 cu. yd. dredging, Chesapeake City Harbor.

North Carolina—U. S. Engr. Office, Norfolk, Va., opens bids Sept. 17 for dredging approx. 394,046 cu. yd. in Inland Waterway between Currituck Sound and Albemarle Sound.

Texas—U. S. Engr. Office, Galveston, let contract to Gulf Coast Dredging Co., 2311½ Ave. C, Galveston, for dredging approx. 37,000 cu. yd. place measurement, including 7000 cu. yd. overdepth dredging. 9-3

Tex., Brownwood—Spencer & Son, St. Jo, Ark., have contract for earth fill at Lake Brownwood, for Brown County Water Improvement Dist. 1, D. W. Ross, Engr.; Standard Paving Co., Gen. Contr., Majestic Bldg., Fort Worth, and 2119 E. 11th St., Tulsa, Okla. 1-15

Tex., Orange—Orange County Comms. Court formed Orange County Reclamation & Conservation Dist. preliminary to election on \$565,000 bonds; Judge DeWitt C. Bennett, Orange; C. K. Akers, Duncan's Woods, and W. T. Dunn, Mauriceville, appointed as supervisors; probably vote in January.

Electric Light and Power

Electric light and power work in connection with many LAND DEVELOPMENT operations involves the expenditure of large sums of money. See that classification for details.

Ga., Atlanta—Weekley Elevator Co., Inc., 407 Bona Allen Bldg., reported, has contract to furnish and install dumbwaiter equipment for Georgia Power Co. at Davis St. plant.

La., Shreveport—Southwestern Gas & Electric Co. let contract to Moloney Electric Co., 5400 Kingshighway, St. Louis, Mo., for: Four 8333 kv-a. 11500/66000 volts transformers for Shreveport substation; three 4000 kv-a. 11000/66000 volts transformers for Shreveport sub station for interconnection at Minden, La.; four 8333 kv-a. 132000/66000 volts for Overton, Tex., substation; Shreveport substation well under way; construction of Overton substation will begin shortly. 8-6

Miss., Natchez—R. H. Bouligny, Inc., 509 W. Moreland St., Charlotte, N. C., has contract for installation traffic signal light system.

Mo., St. Louis—Lakeside Light & Power Co., capital \$50,000, incorporated; R. W. Merkle, 3908A Dover St.

North Carolina—Southern Public Utilities Co., Charlotte, reported, acquired Double Springs Light & Power Co., in Cleveland county.

Oklahoma—Grand Hydro Electric Co., Wash E. Hudson, Pres., 6th & Peoria Sts., Tulsa, reported, granted application by State Conservation Comsn., Oklahoma City, to construct dam on Grand River, 3 miles east of Ketchum; dam 4300 ft. long, will back up water to Miami; lake 56 miles long, 50,000 acres surface area. 7-30

Okla., Tulsa—Public Service Co. of Oklahoma, Tulsa, constructing 8 mile span of 66 kv. line, from company's West Tulsa power station to Sand Springs power station of Oklahoma Power & Water Co. at Sand Springs; 1200 kv-a. substation is under construction by Oklahoma Power & Water Co. at Sand Springs; line will interconnect with 2 lines of Oklahoma Power & Water Co. and Public Service Co. of Oklahoma, serving eastern Oklahoma. Following fur-

nishing material for this line: W. R. Grimshaw Co., Kennedy Bldg., Tulsa, foundation for steel river crossing towers; Muskogee Iron Works, Frankfort and Spaulding Sts., steel and river crossing towers; International Creosoting & Construction Co., 2205½ B St., Galveston, Tex., poles; Locke Insulator Corp., Charles and Cromwell Sts., Baltimore, Md., insulators; Ohio Brass Co., Mansfield, Ohio, hardware; Aluminum Co. of America, Oliver Bldg., Pittsburgh, Pa., conductors; American Cross Arm & Conduit Co., 1458 McCormick Bldg., Chicago, Ill., cross arms. 9-3

Okla., Tulsa—Parent Light Co., incorporated; J. C. Binning, 239 W. 16th Place.

Okla., Wetumka—City, reported, extend power lines to farming district.

Va., Martinsville—B. F. Parrott Co., 1568 Lee St., Charleston W. Va., reported, has contract at \$25,000 for municipal hydro power plant Smith's River; Virginia Bridge & Iron Co., Roanoke, low bidder at \$20,575, for crest gates and appurtenances; S. Morgan Smith and General Electric Co., reported, have contract for hydraulic machinery and electrical mach. 8-20

Va., Orange—Seaboard Public Service Co., Alexandria, advises do not contemplate improvements or extensions in Orange territory beyond normal additions; franchise is renewal of present one. 8-20

Va., Yorktown—The Warner Service Co., 122 W. Clinch Ave., Knoxville, Tenn., has contract for lighting system, National Park Service, Colonial National Monument. 8-20

Flour, Feed and Meal Mills

Ark., Pine Bluff—Whyte Feed Co., Charles L. Whyte, 401 Ga. St., construct flour mill.

Garages and Filling Stations

Ala., Montgomery—Wallace S. Pitts, 200 Thom Place, erect filling station 100 Cloverdale Rd.; Charles D. Bailey, 101 Virginia Ave., has contract for installing underground connections.

D. C., Washington—H. J. Ryan, 1920 Benning Rd., N. E., let contract to J. S. Matthews, 4101 Alabama Ave., N. E., for auto laundry, 826 Bladensburg Rd., N. E.

D. C., Washington—Penna. Greyhound Management Corp., L. C. Major, Local Mgr., 1336 N. Y. Ave., receiving bids for 1 story, 115x300 ft. brick and conc. service building, N. Y. Ave. and Bladensburg Rd.

Fla., Miami—Fred Fisikelli, 1475 S. W. 6th St., construct garage and service station 6th St. and 15th Ave.; rein. conc.; conc. block; stucco; steel sash; comp. roof.

Fla., Miami—G. S. Phillips Const. Co., 226 N. W. 11th Ave., reported, has contract for filling station 725 W. Flagler St.

Fla., Williston—Harvey Motor Co., incorporated; C. Harvey.

Fla., Tallahassee—Tallahassee Motor Co., 311 S. Monroe St., has plans by Al. E. Moore for garage; brick; steel frame; rein. conc. slab found; 2 story and basement; 150x84 ft.; \$25,000; let contract about Oct. 1.

Fla., Tampa—G. Herbert French preparing plans for filling station Harrison & Jefferson Sts., tile and stucco.

Md., Baltimore—Marion J. Nasco, Archt., 14 E. Lexington St., preparing plans for brick garage, El Dorado Ave.; 193x160 ft.; brick.

Md., Baltimore—Sherwood Bros., Baltimore Trust Bldg., open bids Sept. 10 for filling station Club Store & Woodbrook Station. Following estimating Howard F. Geyer, Ridgewood; L. E. Grove, Randallstown; Charles Rohr, 2858 Harlem Ave.; Leo Spampinato, 509 Arlington Ave.; C. F. Porter, 2718 Riggs Ave.; T. Kelly Construction Co., 3112 Grindon Ave., Walter French, 200 W. Cold Springs Lane.

Md., Hampstead—Sherwood Bros., Baltimore, construct filling station, bids opened Sept. 10; following estimating Charles Rohr, 2858 Harlem Ave.; T. Kelly Construction Co., 3112 Grindon Ave.; C. F. Porter, Riggs Ave., all Baltimore; L. E. Grove, Randallstown.

Mo., Kansas City—Cross County Taverns, Inc., chartered; Val B. Mintun, Telephone Bldg.

Mo., Sedalia—Universal Sales & Service Co., incorporated; Howard N. Hansen, V. R. Gabriel.

Mo., St. Louis—St. Louis Motor Parts,

Inc., leased building 1125 Pine St.; install automobile service equipment; enlarge entrance, etc.

Okla., Tulsa—Safeway Rent-a-Car System, incorporated; Elton B. Hunt, Natl. Bank of Comm. Bldg.

Okla., Tulsa—Sears, Roebuck & Co., Chicago, Ill., reported, construct tire demonstration Station S. Cheyenne & 5th Sts.

Tenn., Memphis—Lion Oil Sales Co., Little Rock, Ark., reported, acquired control of 15 stations formerly operated by Pennsylvania Oil Co.

Tex., Lufkin—C. L. Dupuy Chevrolet Co., capital \$25,000, incorporated; C. L. Dupuy.

Tex., San Antonio—San Antonio Garage Co., incorporated; M. A. Snyder, Milam Bldg.

Va., Richmond—A. H. Ewing, Builders Exch. Bldg., Richmond, has contract for service station for M. D. Nunnally, 2824 W. Broad St.

W. Va., Martinsburg—F. C. Foreman construct filling station; install 4 tanks, 1000 gal. each.

W. Va., Martinsburg—Herman Jackson construct filling station, W. King Ct. and Illinois Ave.

Gas and Oil Enterprises

Ala., Birmingham—Wofford Oil Co., 3331 Ninth Ave., N., granted permit by U. S. Engrs., Mobile, for installation pipe lines, valves and small floating dock south bank of Locust Fork of Warrior River near Birmingham; pipe lines to be laid across Short Creek at Crossing No. 1; install three 5000 bbl. steel tanks. 7-16

Fla., Tampa—Florida Petroleum & Refining Co., Atlanta, Ga., and Stovall Professional Bldg., reported, have 90-day option on 17 acres land on estuary channel; construct refinery; may operate fleet of barges down Mississippi and across Gulf for transporting crude oil from Oklahoma.

Ga., Macon—General Assembly passed bill authorizing city to acquire gas and electric plants and to provide distribution systems; bill gives authority to city to provide for bond issue for facilities distributing gas and electricity.

Ky., Louisville—Power Gas Distributing Co., capital \$25,000, incorporated; John Manly, Louisville Trust Bldg.

Louisiana—United Gas System, Rusk Bldg., Houston, Tex., A. D. Greene, Ch. Engr., advises, engineering and construction of compressor station at Alto, Richland Parish, being handled by Engineering Dept., United Gas Public Service Co., Houston; 3200 h.p. station, used for raising pressure of gas from portion of wells Richland field; most of major equipment transferred from another station. 8-27

La., Alto—C. C. Whittelsey, Engr., New York, reported, will have charge of construction for compressor station near Alto, Richland Parish, for Ford, Bacon & Davis Construction Co., Inc., 39 Broadway, N. Y., Dallas, Tex.; cost \$500,000; main building 68x100 ft.; pump building and other structures; 2 water wells of 100,000 gal. and water tower; install three 1250 h.p. Worthington twin-compressor units; company formed as wholly owned subsidiary of Ford, Bacon & Davis, Inc.

La., Shreveport—Consolidated Drilling Co., incorporated; Wm. C. Woolf, Commercial Bank Bldg.

Maryland—Public Service Comsn., Baltimore, granted permission to Maryland Counties Gas Co., Lexington Bldg., subsidiary of Consolidated Gas, Electric Light & Power Co., to begin construction necessary natural gas distributing lines in Baltimore and Howard counties; lines to connect with those of Maryland Gas Transmission Co., 61 Broadway, N. Y., which has pipe connections to bring natural gas from mines in West Virginia; also granted permission to Patuxent Gas Co., to distribute natural product in Montgomery county; Patuxent Co. to issue 250 shares of capital stock to be sold at \$20 share to Central Gas & Electric Co., 105 W. Adams St., Chicago, Ill.; Maryland Counties Gas Co. to issue 50 shares of stock to be sold at \$100 share to the Consolidated Gas Co.; Chesapeake Gas Co., reported, plans petitioning for distribution rights in Harford and Cecil counties. 8-13

Md., Baltimore—City Ice & Fuel Co., 2801 Falls Rd., construct steel, fuel oil storage tanks; H. W. Fox & Co., Bldr., 2907 Greenmount Ave.

Mo., Amsterdam—Kaw Oil & Gas Co., applied to State Public Service Comsn., Jefferson City, for certificate of convenience and

necessity to operate natural gas distribution system in city; gas to be supplied from wells in vicinity of town; provide Bates County with natural gas.

Texas—Humble Oil & Refining Co., Humble Bldg., Houston, reported, construct 3 refineries, cost \$1,000,000, at Pitner Junction, Kilgore and Gladewater.

Texas—Humble Oil & Refining Co., Humble Bldg., Houston, reported, acquired Paso-Tex Pipe Line Co.'s properties in Winkler County.

Tex., Amarillo—Three B Royalty Co., incorporated; W. S. Birge, 1220 W. 12th St.

Tex., Dallas—Burgoyne Oil Corp., capital \$100,000, incorporated; D. C. Burgoyne, 3429 Princeton St.

Tex., Gladewater—Gladetex Refining Co., capital \$20,000, incorporated; H. L. Lockhart.

Tex., Houston—Gulf States Royalty Co., incorporated; Wood R. Alexander, Second Natl. Bank Bldg.

Tex., Marshall—Canadian Oil Producing Co., incorporated; T. H. McElvain, C. M. Beckett.

Tex., Pettus—Phoenix Refining Co. improving and erecting additions to plant; increase output 40%.

Tex., Richmond—Standard Gas Co., capital \$50,000, incorporated; W. L. McCullough.

Tex., Santa Anna—Santa Anna Gas Co., Roy D. Tilston, Pres., Tyler, constructing natural gas distribution system; H. Virgil Flemming, Constr. Engr., 1115 S. Quaker St., Tulsa, Okla.; install 15,000 ft. of 4-in., 40,000 ft. of 2-in., 25,000 ft. of 1-in. line; 450 meters and regulators; Westcott & Gries, Inc., Tulsa Trust Bldg., Tulsa, and Continental Supply Co., 1501 Locust St., St. Louis, Mo., equip. contrs. 8-27

Va., Bristol—Lighthouse Oil & Gasoline Co., Inc., chartered; J. G. Rainero.

Va., Warrenton—Town Council, granted permission to Virginia Gas Distribution Co. lay mains; supply natural gas; has gas franchise; also granted gas franchise in Buena Vista.

W. Va., Huntington—Huffman Oil & Gas Co., incorporated; C. J. Huffman, 2625 Fourth Ave.

Ice and Cold-Storage Plants

Miss., Biloxi—Ocean Spring Ice & Coal Co. will rebuild burned plant.

Tenn., Chattanooga—Volunteer Ice Co., capital \$250,000, incorporated; H. V. Arnett, 106 Lonsdale St., reported, negotiating for Old Hickory Ice Co., Miller Ice Co. and Tennessee Service Co.

Tex., Edcouch—R. E. Ewing, Santa Rosa, construct \$80,000 ice plant, capacity 60 tons daily.

Land Development

Fla., Miami—June Court Corp., capital \$37,000, incorporated; F. L. Knight, City Natl. Bank Bldg.

Ky., Danville—Q. M. Corp. U. S. War Dept., Washington, reported, plans \$75,000 improvements to Perryville Battlefield National Cemetery erect stone caretakers house, garage, workshop; install water supply, electricity, sewage disposal, etc.; J. Curtis Alcock, Chrm. Perryville Battlefield Comsn.

Mo., St. Louis—Ethel Realty & Holding Co., incorporated; Nathan Block, 100 Franklin Ave.

Okla., Perry—Bob Montgomery and Jack McCollum, reported, develop tourist camp Highway No. 77; erect 16 cabins.

Tex., Borger—Miller Realty & Investment Co., capital \$20,000, incorporated; Glenn A. Pace.

Tex., Dallas—M. D. Barksdale Realty Co., capital \$10,000, incorporated; Edwin Barksdale, 1515 N. Fitzhugh St.

Lumber Enterprises

Fla., Fort Myers—Yellow Pine Lumber Co., Inc., chartered; A. R. DesRochers.

Ga., Hapeville—Evans, Inman Lumber Co., Bay View, Mich., and Atlanta, reported, plans expenditure several hundred thousand dollars.

Mining

Fla., New Port Richey—John W. Parks, re-

ported, interested in development of travertine deposit.

Ga., Aubrey—Manganese Corp. of America, W. A. Hauck, Pres., 314 William Oliver Bldg., Atlanta, and White, Ga., completed plans for financing preliminary operations manganese deposits in Chumley section of mines at Aubrey; present operation confined to testing and drilling at Chumley, Bufford, Will Lee, Stevenson and Little Red Top and survey of 14,000 acres; J. C. Stoddard, Engr.; later there may be erected a manganese separating plant and a sintering plant to remove iron from manganese; Brunswick Terminal & Railway Securities Co., Brunswick, and 165 Broadway, N. Y., entered into agreement with Manganese Corp. of America by which the Brunswick Co. will issue to the Manganese Co. 32,250 shares of Brunswick Co.'s capital stock and will receive 600 shares of \$7 first preferred stock of Manganese Corp. and \$70,000 face amount of first mortgage sinking fund 10 yr. 7% gold bonds of Manganese Corp., which company will assume certain obligations of the Brunswick company. 5-21

Kentucky—Federal Materials Co., Baltimore Trust Bldg., Baltimore, Md., incorporated; John M. Butler, Continental Bldg., Baltimore, Md., and A. J. Hoffman, Brown Hotel, Louisville; mine limestone in Kentucky and Missouri.

Mo., Wentzville—Wentzville Stone & Quarry Co., incorporated; Frank G. Arnote.

Miscellaneous Construction

Ark., Stuttgart—Stuttgart Rice Growers' Elevator Co., G. E. Hammans, Pres., and Arkansas Div. of American Rice Growers Co-operative Association broke ground for 140,000-bu. elevator; will mill and store rice. 7-16

Ky., Louisville—U. S. Engr. Office opens bids Sept. 22 for 2300 lin. ft. bank revetment in Ohio River, Stewarts Island and approx. 688 lin. ft. bank channel dike and adjacent bank protection, Ohio River, Pryors Island.

Louisiana—U. S. Engr. Office, Second New Orleans Dist., foot of Prytania St., New Orleans, opens bids Sept. 25 for levee work, designated as follows by item number, name, kind of work, location, estimated yardage (cu. yd.), net height (ft.):

Atchafalaya Front Levee Dist.—R814-A, Waterloo-Hermitage, Pointe Coupee Parish, new and enlargement, 800,000, 18 to 23 and 18 to 25; R814-B, Waterloo-Hermitage, Pointe Coupee Parish, new and enlargement, 800,000, 18 to 24 and 17 to 18; R820, Kelson, West Baton Rouge Parish, new, 580,000, 21 to 23; R822-A, Arbroth-Alford, West Baton Rouge Parish, new, 650,000, 23 to 26; R822-B, Arbroth-Alford West Baton Rouge Parish, 650,000, 23 to 26; R822-G, Arbroth-Alford, West Baton Rouge Parish, new, 650,000, 22 to 26; R628, Solitude-Chamberlain, West Baton Rouge Parish, enlargement, 720,000, 18 to 23; R831-A, Chamberlain-Lobdell, West Baton Rouge Parish, new, 740,000, 23 to 30; R831-B, Chamberlain-Lobdell, West Baton Rouge Parish, new, 740,000, 25 to 30; R831-C, Chamberlain-Lobdell, West Baton Rouge Parish, new, 730,000, 25 to 29; R831-D, Chamberlain-Lobdell, West Baton Rouge Parish, new, 740,000, 21 to 26; R842-A, Port Allen-Brusley, West Baton Rouge Parish, new and enlargement, 610,000, 19 to 20 and 16 to 21; R842-B, Port Allen-Brusley, West Baton Rouge Parish, 545,000, 19 to 20 and 19 to 25; R842-C, Port Allen-Brusley, West Baton Rouge, new and enlargement, 545,000, 20 to 23, 19 to 22; R848-A, Missouri Bend, West Baton Rouge, new and enlargement, 760,000, 22 to 24 and 23 to 24; R848-B, Missouri Bend, West Baton Rouge Parish, new, 770,000, 24 to 28; R848-C, Missouri Bend, West Baton Rouge Parish, new, 770,000, 23 to 28; Pontchartrain Levee Dist.—L868-A, St. Gabriel, Iberville Parish, new, 585,000, 19 to 20; L868-B, St. Gabriel, Iberville Parish, new, 585,000, 18 to 21; L868-C, St. Gabriel, Iberville Parish, new, 580,000, 19 to 23; L895, Darrowville, Ascension Parish, new, 270,000, 16 to 18. 9-3

La., New Orleans—Bd. of State Engrs., 207 New Orleans Court Bldg., opens bids Sept. 30 for Fort Jackson to Jump-bank protection levee, Buras Levee Dist., Plaquemines Parish, consisting of enlarging present back protection levee which is part of Buras Levee Dist., 41,850 ft. long, 6.0 ft. high, 7600 cu. yd.; Johnson Bayou Cross Levee, Red River and Bayou des Glaizes Levee & Drainage Dist., Avoyelles Parish, consisting of changing location of present levee and making opening to accommodate drainage, 700 ft. long, 10.5 ft. high, 7600 cu. yd.

Md., Baltimore—Pennsylvania R. R., W. B. Wood, Engineer in Charge Baltimore Im-

provements, Pennsylvania Sta., Baltimore, reported, have plans ready for bids about Sept. 21 for Union Tunnel, Hoffman St., between Greenmount Ave. and Gay St. (See Railways, 7-23.)

Mo., St. Louis—U. S. Engr. Office, Customs-house, let contracts for 4500 to 8900 lin. ft. piling dikes, Mississippi River: Eliza Towhead, Badgett Construction Co., Caruthersville, \$25,225; Commerce Island, same firm, \$50,864; Harlow Island, Kansas City Bridge Co., Kansas City, \$27,094; Wilson Island, same firm, \$176,907.

Mo., St. Louis—U. S. Engr. Office, Custom-house, let contract to Woods Bros. Construction Co., Lincoln, Neb., at \$54,050, for revetment, Missouri River. 7-30

Tenn., Chattanooga—U. S. Engr. Office opens bids Sept. 15 for diamond core drilling and subsurface investigations of foundations at 11 lock and dam sites, Tennessee River between Riverton and Wilson Dam, Ala., and between Chattanooga and Knoxville, Tenn.

Tenn., Memphis—Mississippi Valley Barge Line Co., 408 Pine St., St. Louis, leased site, Wolf River, for barge terminal; start construction at once.

Tex., Sherman—Diamond Mill & Elevator Co., Kay Kimbell, Pres., Fort Worth, let contract to Jones Hettelsater Construction Co., Mutual Bldg., Kansas City, Mo., for 400,000-bu. conc. addition to grain elevator; 40x125 ft., 12 tanks, 110 ft. high.

Tex., Wichita Falls—State Game, Fish & Oyster Comsn., William J. Tucker, Exec. Sec., Austin, plans enlarging fish hatchery, Diversion Lake; may erect cottage.

Miscellaneous Enterprises

Ala., Mobile—Southern Kraft Corp., subsidiary International Paper Co., 100 E. 42nd St., N. Y., reported may double size of present \$7,500,000 plant; company advises report without foundation.

Ark., Fayetteville—Rufus J. Nelson, Editor Arkansas Countrymen, reported, interested in slaughter plant.

Ark., Pine Bluff—Mrs. Fredericka Finkheimer, Little Rock, acquired building 3rd and Mulberry St.; establish sausage plant.

Ark., Siloam Springs—Siloam Farm and Dairy Products, Inc., capital \$50,000, chartered; Geo. W. Matthews.

Ark., Stuttgart—Stuttgart Rice Growers Elevator Co., capital \$50,000, incorporated; G. E. Hammans.

Fla., Dinsmore—Dinsmore Dairy Co., incorporated; V. C. Johnson.

Fla., Fort Pierce—Heck & Hickman Marine Ways & Machine Shop Co., M. Hickman, has 10-yr. lease on harbor front site, build 200-ton marine ways, track 400 ft. long, equipped to handle yachts, etc.; building for machine shop, 40x50 ft., frame and metal; storage sheds for boats; constructed later; dredge water depth; work begun; cost \$15,000.

Fla., Haines City—Florida Grove Heater Corp., interested; J. E. Palmer.

Fla., Hialeah—Frank Jones, Pres., Chamber of Commerce, publishing daily newspaper, Evening Examiner.

Fla., Miami—United Construction & Equipment Co., incorporated; G. M. Okell, 34 W. Flagler St.

Ky., Ashland—Charles Johnson and James Nolan, Cannonsburg, remodeling building for dairy.

Ky., Lexington—Anglin Tobacco Warehouse Co., W. W. Greathouse, Pres., 135 N. Lime St., construct \$100,000 addition warehouse Angliana Ave.; conc. foundations; comp. roof; 450x110 ft.; Greer & Williams, Contrs.

Md., Baltimore—Globe Poster Corp. of Maryland, 115 S. Hanover St., incorporated; Walter A. Searing.

Md., Baltimore—Stanford Metal Stamping Corp., 122 W. Perry St., incorporated; Israel Silberstein, 2401 Eutaw Place.

Mo., Baltimore—Maryland Baking Co., 317 N. High St., reported, construct bakery Eutaw and West Sts.

Mo., Jefferson City—Capital City News and Post-Tribune, reported, leased building to be erected Cor. Monroe St. and Commercial Ave. by W. N. Brown of Ben Hur Erection Co. and Superior Structural Steel Co., both 5100 Franklin St., St. Louis, Owners; 2 story, sub basement; 45x116 ft.; conc. & brick; terra cotta front; Kennerly & Stiegemeier, Archts.,

Title Guaranty Bldg., St. Louis; soon let contract.

Mo., Kansas City—Central States Publishing Co., incorporated; Horace D. Payne, 718 Scarritt Bldg.

Mo., Kansas City—Rouse Mfg. Co., incorporated; Earl E. Rouse, 2611 Amie Road; manufacture hotel equipment.

Mo., St. Louis—Goldsmith Clothing Co., 1224 Washington Ave., leased building 17th St. and Washington Aves.; install new machinery.

Mo., St. Louis—Popcorn Brokerage & Mfg. Co., 4825 Delmar Blvd., leased building 4601 Delmar Blvd.; manufactures electric and gas fired popcorn machines.

Mo., St. Louis—Rascher Contracting Co., incorporated; Alfred L. Rascher, 6960 Oleatha St.

Mo., St. Louis—Pittsburgh Erie Saw Co., 3327 Lindell; construct 2 story factory and office bldg., 1569 Tower Grove; 44x210 ft., comp roof; \$20,000; Wm. H. & Nelson Cunliff, Bldrs.

North Carolina—E. T. Stille & Co., Lock Box 658, High Point, merged with H. B. Young & Co., 359 W. Chicago Ave., Chicago, Ill.; both companies are manufacturers shingles, stains and wood fillers; John H. Kaizer, Local Mgr.; Young Co. distributes from Atlanta, Ga.; will maintain Southern plants.

N. C., Greensboro—George T. Penny, Greensboro Road, High Point, reported, organized Penny's Chemical Co.; manufacture cold remedy.

N. C., Greensboro—Carolina Fairs, Inc., capital \$100,000, incorporated; Garland Daniel, 403 W. Washington St.

N. C., Greensboro—Blue Bell Overall Co., 524 S. Elm St., leased building 1021 S. Elm St.; install 200 machines; daily output 500 dz. prs. overalls.

N. C., Salisbury—Honey Dew Ice Cream Co., capital \$25,000, incorporated; W. H. Kress.

N. C., Spindale—Jackson's Home Ice & Creamery Co., Jno. L. Jackson, Pres., construct plant, daily output 15 tons ice and 200 gal. ice cream; 40x60 ft.; comp. roof; will let contract about Sept. 10; install refrigeration equipment. See Want Section—Machinery and Supplies.

N. C., Winston-Salem—Bennett Rabbitry, Inc., capital \$100,000, chartered; Chas. T. Bodenhamer, 1814 Walker Ave.

Okla., Enid—Industrial Iron Works, Inc., chartered; E. C. Shriver.

Okla., Oklahoma City—J. I. Case Plow Co., W. F. Bartruff, Mgr., 13 E. Main St., erect \$35,000 warehouse; brick and rein. conc., 1-story, 50x120 ft.; Ellis, Nicholson & Cramer, Inc., Contr., Security Bldg. 7-30

Okla., Oklahoma City—Arlie K. Purdy, Royal Palm Dehydrating Co., Pawhuska, reported, construct dehydrating plant; 175x90 ft.; 2 stories; fireproof with stucco exterior; install \$15,000 hydrating mch.; capacity 20 tons; plan additional plants 4 other cities.

S. C., Kingstree—Williamsburg Dairy Products, Inc., G. T. McIntosh, Pres., leased building; remodel for dairy; purchase equipment.

Tenn., Knoxville—Austin Co., Greeneville, Tenn., Fred H. Austin, Pres., remodel old Whittle Trunk & Bag Co.'s plant 6th Ave. for tobacco re-drying plant.

Tenn., Memphis—United Chemical Co., 46 N. Second St., incorporated; J. M. Boggan.

Tex., Gonzales—Stahl Bros. Bottling Co., Inc., chartered; Jake Stahl.

Tex., San Antonio—Terminix & Wood Preserving Co., incorporated; Curtis T. Vaughn, Terrell Road.

Tex., Sonora—Judge J. A. Whitten, Chrmn. Livestock Sanitary Comsn., and A. B. Conner, San Angelo, reported, interested in erection bittersweet laboratory at Ranch Experiment Station; Legislature appropriation of \$20,000.

Tex., Tyler—Tyler Construction Co., incorporated; E. H. Locher, W. F. Carter.

Va., Arlington—Columbia Cleaners & Dyers, Inc., capital \$25,000, incorporated; Earl F. Byroad.

Va., Chatham—Piedmont Theaters, Inc., capital \$20,000, incorporated; Langhorne Jones; amusements.

Va., Clarendon—Arlington County Bd. of Supervisors, directed C. L. Kimmer, Engr., to purchase 600 gal. triple combination pumper fire engine from American La France delivery Ballston Fire Dept.

Va., Lynchburg—G. and W. Mfg. Co., J. S. Garber, 502 Clay St., leased space in Loft Bldg. for necktie mfg. plant.

Va., Petersburg—General Tobacco Packers Corp., incorporated; Alexander Hamilton, Jr., 701 Union Trust Bldg.

Va., Richmond—Wilbur Co., Inc., capital \$25,000, incorporated; J. W. Wilbur, Dumbarton; manufacture drugs.

Va., Richmond—International Advertising Corp., capital \$25,000, incorporated; W. E. Thompson, 3017 W. Grace St.

Va., Richmond—L. B. Jenkins Redrying Co., capital \$50,000, incorporated; Gay B. Hazlegrove, Amer. Bank Bldg.

Motor Bus Lines and Terminals

Ala., Mobile—L. N. Stanter and Tony de Angelo, applied to Alabama Public Service Comsn., Montgomery, for permission to operate freight trucks between Mobile and points in Baldwin County.

Ark., Little Rock—Missouri Pacific Transportation Co., Arcade Bldg., reported, acquired Palestine-Houston line of South Texas Coaches Co.; operate bus service Little Rock, Ark., to Houston, Tex.

Ga., Waycross—Dixie Greyhound Lines, Inc., 67 Ellis St., N. E., Atlanta, erect bus depot, Pendleton and Elizabeth Sts.

Ky., Bowling Green—Bowling Green-Hopkinsville Bus Co., Inc., granted permission by Joe Ryan, Commr. Motor Transportation, Frankfort, to operate passenger bus line between Russellville, Ky., and Old Hickory, Tenn., via Adairville, Ky., Springfield, Greenbrier, Goodlettsville and Anqui, Tenn.

Md., Baltimore—Thomas Mullan, 3945 Greenmount Ave., has contract for \$22,000 freight terminal Hollins St. nr. Fremont Ave. for Traders Delivery Co., 719 Linden Ave.; 1 story; brick; 170x100 ft.

Md., Baltimore—Metropolitan Taxicab Co., Inc., chartered; Morris Franklin, 1306 E. Baltimore St.

Mo., Cape Girardeau—J. E. Dyes, University City, and B. F. Merrick, 1311 Jefferson Ave., operate motorbus system.

Mo., Sedalia—Spears Ship-By-Truck Co., incorporated; Roy F. Spears, Hugh C. Spears.

N. C., Charlotte—Bowman Transportation Co., Bowman, S. C., reported, granted permission by South Carolina Railroad Comsn., Columbia, to operate interstate motor freight service between Columbia, S. C., and Charlotte, via Camden and Kershaw.

N. C., Raleigh—Safety Transit Co., 300 W. Lenoir St., reported, granted permission by State Railroad Comsn., Columbia, S. C., to operate passenger line Raleigh through Cheraw and Florence to Charleston, S. C., and Savannah, Ga.

Tex., Corpus Christi—Vannoy Transportation Co., incorporated; L. R. Vannoy, 1121 Park St.

Railways

Md., Baltimore—Pennsylvania R. R., W. W. Atterbury, Pres., Philadelphia, Pa., let contract to John Casey Co., Aspinwall St., Pittsburgh, Pa., for 2 additional main tracks and certain industrial and yard tracks between Gwynn's Run Cabin and London Park Cabin, Baltimore, at approx. \$298,000. 8-27

Md., Baltimore—Pennsylvania R. R. See Bridges, Culverts and Viaducts. 7-23

North Carolina—South Carolina—Southern Ry., G. L. Sitton, Ch. Engr. M. W. & Struc., Charlotte, N. C., reported, completed plans for revision of lines between Hayne, S. C., and Biltmore, N. C.

S. C., Columbia—Atlantic Coast Line R. R., J. E. Willoughby, Ch. Engr., Wilmington, N. C., made preliminary survey of right-of-way for track to connect veterans' hospital and spur track to Camp Jackson.

Tenn., Chattanooga—Chattanooga, Alabama & Georgia Ry., H. F. Bohr, V.-Pres. in charge of operation, advises are laying 6 mi. 85-lb. rail this month; plan to lay additional heavy rail during next 12 months to cost approx. \$250,000, but expenditure not authorized; work by regular construction forces. 8-20

W. Va., Alderson—Chesapeake & Ohio Ry. Co., C. W. Johns, Ch. Engr., Richmond, Va., authorized extending west-bound passing track, est. \$28,400.

Roads, Streets and Paving

In connection with LAND DEVELOPMENT large sums are expended for roads, streets, paving and sidewalks. Details will be found under that classification.

Proposed Construction

Ark., Little Rock—Pulaski County Comms., W. F. Sibeck, Judge, completing plans for paving in Annex No. 1, W. 12th St., Road Dist. No. 30, farm-to-market project; Glenn D. Dougless, County Road and Bridge Engr.

Ark., Mena—City Comms., have low bid from Grady Garms, Rector Bldg., Little Rock, at \$50,221, for conc. paving state highways through city.

D. C., Washington—Office of Executive Officer, Arlington Memorial Bridge Comsn., Navy Bldg., Washington, D. C., opens bids Sept. 17 for paving, curbs, sidewalks, etc., on and around bridge plaza, east end Arlington Memorial bridge; 20,700 sq. yd. cold bitum. conc. paving of which about 16,000 sq. yd. has 10-in. macad. base; 3630 lin. ft. curbs, and 8340 sq. yd. scrubbed pebble finish sidewalks; quantities include paving Parkway underpass and Parkway approach for which no foundation is required, and also laying sidewalks on upstream side of Arlington Memorial bridge and on Parkway underpass and Parkway approach.

Ky., Louisville—See Miscellaneous Construction.

La., Lake Arthur—Town soon start work paving Main St. to connect Lake Arthur-Jennings paved road; \$15,000 bonds voted.

La., Shreveport—Caddo Parish Police Jury authorized J. T. Bullen, Parish Engr., to start extension of 70th St., Cedar Grove, Line Ave. east to Gilbert St.

MARYLAND—State Roads Comsn., L. H. Steuart, Sec., Baltimore, opens bids Sept. 15 for 5 roads in following counties and in Baltimore City:

Baltimore City—0.22 mi. sheet asphalt, Mt. Royal Ave., Lafayette Ave. to North Ave., BC-109-72;

Talbot—1.36 mi. conc., Cordova-Easton road, end of T-35 to Wye Mills-Easton road, T-44-24;

Washington—0.84 mi. macad., Dry Run to Pennsylvania state line, W-100-62;

Wicomico—4.68 mi. penetration slag macad. resurfacing, Salisbury-Nanticoke road, end of Cont. Wi-29 via Tyaskin, Bivalve to Nanticoke, Wi-56-14;

Worcester—1.0 mi. conc., Snow Hill-Whiton road, end Cont. Wo-77 toward Whiton, Wo-103-14.

Maryland—State Roads Comsn., L. H. Steuart, Sec., Baltimore, has low bid from Hannaman Burroughs Co., Salisbury, for 0.9 mi. conc. shoulders, through Princess Anne, S-51-111, Somerset oCounty. 8-27

Missouri—State Highway Comsn., T. H. Cutler, Ch. Engr., Jefferson City, opens bids Sept. 18 for 47 road projects, including 15 bridges; includes crushed stone, gravel, gravel haul, concrete, chats and crushed rock.

Mo., Clayton, St. Louis—St. Louis County, Roy Jablonsky, Highway Engr., opens bids Sept. 16 for improving several streets.

Mo., Clayton, St. Louis—St. Louis County, Roy Jablonsky, Highway Engr., opens bids Sept. 16 for improving S. Broadway, Laclede Sta. road, Jackson Ave. and Rock Hill road.

Mo., St. Louis—City, Bd. of Public Service, City Hall, opens bids Sept. 29 for Letting 4360, improving Grape Ave., and Letting 436, improving Oriole Ave.

NORTH CAROLINA—State Highway Comsn., Leslie R. mes, Engr., Raleigh, opens bids Sept. 15 for 6 roads and bridge in following counties:

Chowan—12.108 mi. widening sand asphalt to 18 ft., Route 32, Smalls Cross roads to Edenton, 3900 cu. yd. common excavation, 1000 cu. yd. borrow excavation, 11,150 tons and asphalt base, 9600 tons and asphalt surfacing No. 1131;

Brunswick—10.126 mi. 18-ft. sand asphalt, 3-in. base, 2-in. top, Route 30, Charlotte to S. C. line, 3000 cu. yd. drainage ditches, 11,800 cu. yd. common excavation, 32,400 cu. yd. rock, 106,910 sq. yd. sand asphalt, 5930 lb. rein. steel in structures, No. 3201;

Durham—5.954 mi. 18-ft. unif. conc., Route 751, connecting Routes 75 and 10, 500 cu. yd. drainage ditches, 7700 cu. yd. common excavation, 3900 cu. yd. borrow excavation, 66,400

sq. yd. plain conc. pavement, 5990 sq. yd. sand asphalt surfacing, No. 4161;

Alamance—bridge between Burlington and Greensboro, Route 10, 195 cu. yd. Class "A" conc., 24,780 lb. rein. steel, No. 5050;

Guilford—0.399 mi. 30-ft. unif. conc., bridge approaches, Rock and Buffalo Creeks, 1300 cu. yd. common excavation, 500 cu. yd. borrow, 6669 sq. yd. plain conc. pavement, No. 5321; 2.513 mi. asphaltic conc., Route 60, Greensboro to Guilford County line, 500 cu. yd. drainage ditches, 18,000 cu. yd. common excavation, 1000 cu. yd. borrow, 30,320 sq. yd. conc. base and header, 36,440 sq. yd. asphaltic top, 6850 sq. yd. sand asphalt surfacing, 2760 lin. ft. curb and gutter, No. 5340;

Watauga—1.879 mi., Route 60, Boone toward New River, 500 cu. yd. drainage ditches, 13,200 cu. yd. common excavation, 3700 cu. yd. borrow, 19,100 cu. yd. rock, 185 cu. yd. Class "A" conc. and 24,490 lb. rein. steel in structures, No. 7740.

OKLAHOMA—State Highway Comsn., Sam R. Hawks, Chmn., Oklahoma City, has low bids for 4 roads in following counties:

Seminole—7.7 mi. conc., State Highway 18, Hyde Construction Co., Enid, \$108,513;

Muskogee—10.55 mi. conc., Highway 64, Ellis & Lewis, Muskogee, \$103,606;

Pottawatomie—11.196 mi., Highway 18, S. O. Maxey & Co., Durant, \$143,199;

Kay—6.925 mi., State Highway 11, Highway Construction Co., Tulsa, \$92,814.

Oklahoma—State Highway Comsn., Sam R. Hawks, Chmn., Oklahoma City, has low bids for 2 roads and bridge in following counties:

Beckham—4.594 mi. grading, drainage, State Highway 24, SAP 791A, and 6.532 mi. grading, drainage, State Highway 24, SAP 791B, Merveldt, Lawson & Scott, El Reno, \$24,868;

Pawnee—2 60-ft. I-beam spans, Highway 18, Grant Williams, Oklahoma City, \$9240.

Oklahoma—Fort Sill, Lawton—Quartermaster opens bids Oct. 6 for conc. roadway; approx. \$73,528 plus equal amount from state.

Oklahoma—Tulsa—City, Earl Logan, City Aud., has plans in progress for fill, rein. concrete paving and overpass to bridge, 21st St., \$100,000; Wood & Witten, 204½ E. Third St., and Victor H. Cochrane, Wright Bldg., Engrs.

Oklahoma—Tulsa—City Comms., approved plans for widening second of 3 districts which eventually will improve W. 11th St. entire length between Boulder and Maybelle Ave., \$13,402; H. A. Parker, City Engr.

TENNESSEE—State Dept. of Highways and Public Works, R. W. Baker, Commr., Nashville, opens bids Sept. 25 for 2 roads in following counties:

Smith—0.733 mi. grading, draining approaches to bridge over Caney Fork River, between Carthage and Elmwood, State Highway 24, FAP 229-A, 16,757 cu. yd. excavation;

Washington—0.402 mi. grading, draining, State Highway 34, approaches to bridge over Watauga River between Johnson City and Bluff City, 11,347 cu. yd. excavation, 38,238 cu. yd. borrow excavation, 257 cu. yd. rip rap.

TEXAS—State Highway Comsn., Gibb Gilchrist, Highway Engr., Austin, plans 3 roads in following counties:

Walker—7.8 mi. rein. conc. pavement, Highway 45, Huntsville to Phelps via Dodge Spur, SAP 900, Unit 2;

Karnes City—15.502 mi. caliche and crusher run sandstone base course, Highway 112 between Karnes City and Nixon, \$164,000, alternate type, conc. base course for rigid type pavement, \$193,000, SAP 789-B&C, Unit 2;

Refugio—13.706 mi. rein. conc. pavement, Highway 57, Aransas County line to Calhoun County line, SAP 807-B, Unit 2.

TEXAS—State Highway Comsn., Gibb Gilchrist, Highway Engr., G. G. Wickline, Bridge Engr., Austin, considering 13 road and 8 bridge projects in following counties:

Bell—3.064 mi. gravel or broken stone surface course, Salade to Amity School, SAP 860, Rev. 2, Highway 2, 1,020 mi. grading, draining, north and Salado Creek bridge to Sta. 58 plus 80, SAP 860 Rev., Highway 2;

Cherokee—10.514 mi. triple asphalt, Neches River (Anderson County line) to Jacksonville, SAP 704-G & H, Highway 43;

Fisher—15.665 mi. gravel base and double bitum. surface treatment, Nolan County line to Roby, 511-C, Highway 70;

Matagorda—1542.0 mi. grading, draining, Bay City south to 2.5 mi. south of Wadsworth, SAP 455 and FAP 175 Reop. and 428 Reop., Highway 60; 12,450 mi. conc., Bay City south to 2.5 mi. south of Wadsworth, SAP 455 and FAP 175 Reop. and 428 Reop., Highway 60; 8,894 mi. conc. 2.5 mi. south Wadsworth to Matagorda, FAP 416 Reop., Highway 60;

Navarro—8.046 mi. conc., Richland to Freestone County line, FAP 463-A, Highway 14;

Pecos—13.179 mi. grading, draining, Fort Stockton to 14 mi. east, FAP 618-A, Highway 14; 616-5-ft. bridge and approaches, Gayanosa and Hackberry Creeks, conc. girder and I-beam span, Gayanosa and Hackberry Creeks, FAP 612-C, Highway 27;

San Jacinto—11.189 mi. gravel surface course, Cold Spring to Shepherd, SAP 682-A, Highway 150;

Tarrant—5.679 mi. conc., City limits Ft. Worth southwest to Village Creek, SAP 958-E, Highway 34;

Walker—7.8 mi. conc., Huntsville to Phelps, SAP 900, Highway 45;

Woods-Upper—3.564 mi. grading, draining, 1.95 mi. east of Hawkins to Big Sandy, FAP 109 C & D Rev., Highway 15;

McLennan—300-ft. overpass M.-K.-T. and S. L. S. railroads, conc. girder and I-beam span;

Presidio—222 ft. rein. conc. bridge, Perdiz, Childress and Aguila Creeks, SAP 970-B, Highway 17;

Runnels—797-ft. steel I-beam A. & S. R. R. overpass, Elm Creek and approaches;

Tyler—277 ft. rein. conc. large structures, FAP 630-A, Highway 49;

Val Verde—527-ft. bridge over Eagle Nest Canyon and Willow Creek, FAP 411-C, Highway 3;

Victoria—steel truss span and conc. girder bridge, Guadalupe River and approaches, FAP 551-J, Highway 12;

Wheeler—112-ft. C. R. I. & P. R. R. overpass and approaches, conc. girder and I-beam span, FAP 547-F, Highway 75.

TEXAS—State Highway Comsn., Gibb Gilchrist, Highway Engr., G. G. Wickline, Bridge Engr., Austin, opens bids about Sept. 21 or 22 for 30 roads and 16 bridges in following counties:

Colorado—13.569 mi. grading, draining, Highway 71, Wharton County line to Altair, SAP 945-B, Unit 1;

Hall—5.565 mi. gravel base with triple asphalt surface treatment, Highway 18, Motley County line to Turkey, FAP 530-C, Unit 2;

Harrison—7.050 mi. triple asphalt surface treatment, Highway 15, Hallsville to Gregg County line, FAP 142 Reop., Unit 2;

Victoria—steel, conc. bridge over Guadalupe River, Highway 12, 22-ft. roadway, total length of proj. 742.5 ft., length of bridge structure, 377.2 ft., \$60,000, FAP 551-J;

Pecos—number of rein. conc. bridges, Highway 27 east of Fort Stockton, \$65,000, FAP 618-A;

Presidio—rein. conc. bridges, 22-ft. roadway on 17.127 mi. Highway 17, between Perdez Flat and Bunton Flat, \$18,000, SAP 970-B;

Hunt—2.511 mi. grading, draining, Highway 1, end of FAP 171 southwest of Greenville to Wellington St., Greenville, SAP 949-A, Unit 1;

Kerr—7.234 mi. grading, draining, Highway 27, Kerrville to Ingram, FAP 243-C, Unit 1;

Lubbock—12.892 mi. grading, draining, Highway 137, Lubbock southwest to Hockley County line, SAP 716-B, Unit 1;

Van Zandt—1.317 mi. grading, draining, Highway 15, east from Fruitvale, FAP 363-B, Unit 1;

Victoria—120-ft. steel, conc. overpass structure, 24-ft. roadway, over G. H. & S. A. Ry., Highway 148, SAP 840-G;

Delta-Hopkins—1200-ft. steel, conc., timber pile trestle bridge over Sulphur River, Highway 154, SAP 950-D;

Nolan—3.945 mi. gravel base course with double bitum. surface treatment, Highway 70, Sweetwater to Fisher County line, FAP 511-A, Unit 2;

Navarro—8.036 mi. rein. conc. paving, Highway 14, Richland to Freestone County line, FAP 463-A, Unit 2;

Brazoria—13.860 mi. rein. conc. pavement, Highway 36, Fort Bend County line to West Columbia, SAP 889-C and SAP 738-F, Unit 2;

Henderson—2.324 mi. iron ore gravel base course and triple bitum. surface treatment, Highway 31, Smith County line to Brownsville, FAP 545-A, Unit 2;

Brazos—15.171 mi. grading, draining, Highway 6, 4 mi. southeast College Sta. to Grimes County line, FAP 471-1, Unit 1;

Dallas—2.242 mi. caliche base course with triple asphalt surface treatment, Highway 15-A, Long Creek to Scyene road, SAP 946-A, Unit 2;

Fisher—15.665 mi. gravel base course with double bitum. surface treatment, Highway 70, Nolan County line to Roby, FAP 511-C, Unit 2;

Matagorda—8.349 mi. grading, draining, Highway 60, 2.5 mi. south of Wadsworth to Matagorda, FAP 416 Reop., Unit 1;

San Jacinto—8.323 mi. grading, draining, Highway 156, 5 mi. north Cold Springs to Point Blank, SAP 682-D, Unit 1;

Tarrant—8.426 mi. rein. conc., Highway 34, Village Creek to Mansfield, SAP 958-B, Unit 2;

Van Zandt—4.306 mi. grading, draining,

Highway 15, Grand Saline to Fruitvale, FAP 363-C, Unit 1;

Bell—12.990 mi. rein. conc., Highway 63, Temple to Falls County line, SAP 670-C, Unit 2;

Bastrop—142-ft. conc. bridge over Alum Highway 71, M-14-Q-4;

Falls—705-ft. steel I-beam span timber pile trestle bridge over Cottonwood Creek, Highway 44, M-9-0-3;

Cherokee—10.320 mi. triple asphalt surface treatment, Highway 37, Jacksonville north to 2 mi. south of Smith County line, SAP 929-A&B;

Brazos—3.149 mi. grading, draining, Highway 6, Bryan to College Sta., FAP 471-F, Unit 1;

Presidio—17.128 mi. grading, draining, Highway 17, Perdiz Flat to Bunton Flat, SAP 970-B, Unit 1;

Rains—9.353 mi. iron ore gravel and crushed stone base and double bitum. surface treatment, Highway 42, Wood County line to Emory, SAP 361-A, Unit 1;

Tarrant—5.678 mi. grading, draining, Highway 34, Fort Worth limits southwest to Village Creek, SAP 958-E, Unit 1;

Tyler—10.095 mi. grading, draining, Highway 40, Hardin County line to Hillister, FAP 630-A, Unit 1;

Val Verde—6.378 mi. grading, draining, Highway 2, 2 mi. west Langtry to 4 mi. east Langtry, FAP 411-S, Unit 1;

Matagorda—timber pile trestle bridge over Live Oak and Boggy Creeks, Highway 60, total 152 ft., 22-ft. roadway, FAP 175-Reop.;

McLennan—conc. girder, steel I-beam overpass and approaches, 410 ft. total length, over M.-K.-T. Ry., Highway 31, FAP 605-B;

Narorro—drainage unit, to include electric motor, conc. house, etc., Highway 14, B. & R. I. Ry. crossing, SAP 875-B;

Refugio—13.706 mi. rein. conc. pavement, Highway 57, Aransas County line to Calhoun line, SAP 807-B, Unit 2;

Dallas—8.816 mi. reconstructing present surfacing, Highway 15-A, Scyene road to Dallas limits, SAP 946-B;

Kerr—conc. girder bridges over Town, Dietert, Goat and Sunset Creeks, total length 435.5 ft., Highway 27, FAP 243 Reop.;

Bell-Williamson—7.669 mi. gravel or broken stone surface course, Highway 2, 3 mi. south of Williamson County line to Salado, SAP 824, Unit 2;

Colorado—conc. girder bridges over Dry Branch, Skull Creek and relief, total length 513 ft., Highway 71, SAP 945-B;

Brown—conc. girder and steel I-beam span overpass and approaches, total length of structure, 216.5 ft., 24-ft. roadway, over Frisco Ry., Highway 7, FAP 583-B, \$35,000;

Kimble—conc. girder and steel I-beam span bridges, total length of project, including approaches about 3300 ft., total length of bridges 878 ft., over N. Llano River, Coparas Creek and Buck Hollow, \$70,000, FAP 425-F;

King—conc. girder bridges over North and South Wichita Rivers and Willow Creek, total length of project 655.5 ft., Highway 4, SAP 854-I;

Kinney—224.5-ft. conc. girder and steel I-beam span overpass over G. H. & S. A. Ry., Highway 3, FAP 484-D;

Leon—steel I-beam timber pile trestle bridges over Buffalo and Keechl Creeks and approaches, total length of project about 1.844 mi., bridges 2522.5 ft., Highway 4, FAP 453-J.

Tex., Beaumont—City Comsn. has low bids for streets: Paving Fourth St. and 2 sections of Ave. E. Scott Shambaugh, apparent low, approx. \$83,000; Fourth St. and Franklin St., Broussard-Warfield, apparent low, \$64,000.

Tex., Brownsville—Cameron County Comms., Court has low bids for roads: Four Posts cut-off road to Boca Chica, 1.5 mi., Dodds & Wedegartner, Harlingen, \$24,980; grading and structural work for same, L. G. Nichols, \$3543; 4.8 mi. grading, draining, Coffee road, Highway No. 4 to 14th St., L. G. Nichols, \$9900; 1.1 mi. grading, draining, Morton road, Los Ebanos to Resaca, Dodds & Wedegartner, \$3353. 8-13

Tex., Houston—City, J. M. Nagle, City Engr., has low bid from Brown & Root, Inc., 4300 Calhoun St., at \$45,100, for 1 mi. paving, 20th St.

Tex., Houston—City, J. M. Nagle, City Engr., opens bids soon for paving first section of loop road from North Main St. and Airline road to Lowell St., 20th St.

Tex., San Antonio—City, Paul Steffler, Street Commr., may extend Durango St.

VIRGINIA—State Dept. of Highways, C. S. Mullen, Ch. Engr., Richmond, has low bids for road and bridge in following counties:

Spotsylvania—bridge over Hazel Run, Route 31, F205B1, Falmouth Bridge Co., Inc., Petersburg, \$3836;

Isle of Wight-Southampton—0.288 mi. grad-

ing, draining, Route 12, F160A1B1, Fredericksburg Bridge Co., Fredericksburg, \$13,846.

VIRGINIA—State Dept. of Highways, C. S. Mullen, Ch. Engr., Richmond, opens bids Sept. 22 for 2 roads and 4 bridges in following counties:

Appomattox—112-ft. bridge over David Creek, Route 13, 4 mi. from Caskey;

Nansemond—3 mi. conc., Route 503, Bellville west;

Botetourt-Roanoke—widening 3 steel beam span bridges near Roanoke, Route 33, 2 over Carvins Creek and 1 over Tinkers Creek.

Craig—1.3 mi. grading, draining, Route 22, from West Virginia line east.

WEST VIRGINIA—State Road Comsn., Geo. E. White, Sec., Charleston, has low bids for 14 roads and 2 bridges in following counties:

Roane—2.41 mi. grading, draining, Cemetery Hill road, Bosco & Ritchie, Ravenswood, \$68,504;

Mingo-Logan—8.5 mi. surface treatment, Island Creek-Horsepen road, Carey-Reed Co., 613 Guaranty Bk. Bldg., Lexington, Ky., \$19,317;

Mingo—6 mi. surface treatment, Horsepen-Justice road, Carey-Reed Co., \$12,248;

Monroe—10 mi. grading, draining, Sweet Springs road, James Cain & Co., Elkins, \$82,466;

Randolph—4.8 mi. grading, draining, conc., Huttonsville-Riffe School road, S. G. Polino, 208 Newton St., Fairmont, \$122,176;

Mineral—7 mi. grading, draining, shale surfacing, Patterson-Alaska road, Langhorne & Langhorne, First Hunt. Natl. Bk. Bldg., Huntington, \$80,998;

Morgan—3.6 mi. grading, draining, shale surfacing, Paw Paw to Hampshire County line, Parker Construction Co., Morgantown, \$99,283;

Hardy—Sinks bridge, conc. substructure, Gilbert Construction Co., Glen Hedrick, \$10,025; superstructure, Fairmont Mining Machine Co., 10th St. and Belt Line, Fairmont, \$10,200;

Preston—Little Sandy Creek bridge, span conc. arch, C. C. Dodd, Spencer, \$6149;

Boone—2.8 mi. grading, draining, Rock Creek road to Foster road, Harry Hatfield, Barboursville, \$39,125;

Doddridge—4.08 mi. grading, draining, Market-Gilmer County Line road, Hope Construction Co., Louisa, Ky., \$57,259;

Greenbrier—4 mi. stone base streets, Lewisburg, U. S. 60, Elk Securities Co., \$22,000; 2 mi. approaches to Caldwell bridge, Echols Bros., Inc., Alderson, \$12,212;

Hampshire—8.6 mi. grading, draining, shade surfacing, Wardsville-Lehew road, Keeley Construction Co., Empire Bldg., Clarksburg, \$120,363;

Hancock—2 mi. conc. paving for Weirton overhead, Ben C. Springer & Co., Rayland, Ohio, \$14,769;

Mason—8.5 mi. surface treatment, Point Pleasant-Leon road, Southern Oil & Tar Co., Louisville, Ky., \$15,274.

W. Va.—Huntington—City Comsn. authorized calling for bids for 1931 portion of new route of Highway 60 in western part of city; includes fills through Twelve Pole Creek bottoms and drainage structures, \$27,000.

W. Va.—Huntington—City, Roy McElhaney, Ctlf. Clk., opens bids Sept. 16 for city's part of road to Big Sandy, including draining, borrow excavation and grading, state Proj. 2050; R. W. Breece, City Engr.

W. Va.—Wheeling—Ohio County Comms., C. E. Kindelberger, Engr., opens bids Sept. 14 for 2000 ft. rein. conc. highway, Peters Run road and 600 ft., Glenn's Run, Warrwood.

Contracts Awarded

Ala., Tuscaloosa—McCalla & Kenan, Bell Bldg., Montgomery, have contract for 2 mi. paving, \$16,600.

Ark., Mena—City Comms. let contract to Phoenix Co., Fort Smith, at \$50,454, for conc. paving.

Ark., Texarkana—Otto Yenglin has contract for paving Seventh-Ninth-Laurel St.; 6-in., untopped conc.

Fla., Orlando—Orange County Bd. of Comms. let contracts totaling \$73,000 for material for constructing Vineland-Winter Garden road; Birmingham Slag Co., Comer Bldg., Birmingham, Ala., 1450 tons slag; Peninsula Lime Rock Co., J. R. Merle, Orlando, representative, 25,000 tons lime rock; Barrett Co., 36th St. & Grays Ferry Ave., Philadelphia, Pa., 12,450 gal. tar prime; Mexican Petroleum Co., Tallahassee, 24,850 gal. tar prime.

La., Clinton—City, W. L. Haney, Clk., let contract to Miller-Hutchinson Co., Box 728, Alexandria, for paving St. Helena St.

Mo., St. Louis—City, Bd. of Public Service, City Hall, let contracts for street work; Hodiament Ave., asphalt, Central Paving & Construction Co., 5523 Manchester St., \$26,973; Delor St., asphaltic conc., Flinn Paving Co., 1405 S. First St., \$17,437; Juniata St., Warrenite bitulithic, Granite Bituminous Paving Co., Ry. Exch. Bldg., \$33,219; Neosho St., asphaltic conc., Flinn Paving Co., \$17,404; Walsh St., asphaltic conc., Flinn Paving Co., \$17,150; Nottingham Ave., asphaltic conc., Flinn Paving Co., \$2446; Devonshire Ave., asphaltic conc., Flinn Paving Co., \$2254; Walsh St., asphaltic conc., Flinn Paving Co., \$1559; Delor St., asphaltic conc., Flinn Paving Co., \$2202; Itaska St., asphaltic conc., Flinn Paving Co., \$1507; Neosho St., asphaltic conc., Flinn Paving Co., \$1664.

North Carolina—State Highway Comen., Leslie R. Ames, Engr., Raleigh, let contract to Blythe Bros. Co., Inc., Brevard Court, for Projects 5471 and 5661, 7 mi. sand asphalt, Route 241, Aberdeen to Scotland County line, Hoke and Moore Counties.

Sewer Construction

Sewer construction in LAND DEVELOPMENT projects involves the expenditure of large sums of money. Under that classification details of these improvements are reported.

D. C., Washington—Dist Commrs. received following low bids for sewers: W. A. Pate, Evans Bldg., for Tuckerman St., 2 ft. to 4 ft., conc. pipe; R. D. Schlegel, 1333 Buchanan St., for 35th St., storm water sewer, 24, 21 and 18 in. t. c. pipe, Randolph St. outlet, 12-in. pipe, 18th St., N. E. sewer, 21 and 18 in. t. c. pipe, 39th St. storm water, 18 and 15 in. t. c. pipe and Benning Rd. service sewer, 18-in. t. c.; W. A. Pate, 16th storm water, 2 by 3 ft. brick and conc. and 24, 21 and 18 in. t. c. pipe.

Md., Baltimore—Bd. of Awards receives bids Sept. 16 for sewers, Sanitary Contr. 269.

Mo., St. Louis—Martin & Reilly, 7227 Lindell Blvd., reported, low bidder at \$86,024, for Wherry Ave. public sewer outlet.

Okla., Pauls Valley—Barbour & Short, Norman, reported, has contract at \$35,000 for sewers and septic tank Boys Training School; Brown & Myers, Petroleum Bldg., Oklahoma City, Conslt. Engrs.

Tenn., Maryville—City, W. H. Williams, Judge, started work on \$60,000 sewer system.

W. Va., Parkersburg—Frank and Joseph Salvucci, 6601 Callowhill St., Philadelphia, Pa., has contract at \$108,367, for sewers in Sanitary Dist. No. 1; contractor to furnish all material, including clay pipe; items include 72,000 cu. yds. excavation; 32,000 ft. of 6-in., 35,000 ft. of 8-in., 4600 ft. of 10-in., 2000 ft. of 12-in., and 1350 ft. of 15-in. pipe; 170 manholes; L. G. Merrill, City Engr.

Telephone Systems

Ark., Kingsland—C. B. Atwood applied to Arkansas Railroad Comsn., Little Rock, for permission construct telephone line between New Edinburg and Kingsland.

Md., Baltimore—Chesapeake & Potomac Telephone Co., of Baltimore City, authorized expenditure \$117,110, for extensions in Maryland; work includes switchboard equipment addition in Baltimore; pole replacement in Essex, Chase, Thurmont, and Kensington central office areas; additional aerial cables at Bethesda and Rockville; installation telephone repeaters for long distance calls and toll testboard equipment at Easton.

Okla., Kingfisher—Western Telephone Corp. plans installing common battery telephone system.

W. Va., Charleston—Chesapeake & Potomac Telephone Co., of West Virginia, approved expenditure of \$298,200 for additions and improvements in West Virginia, major portion to be spent at Charleston; lay underground and aerial cables, switchboards, etc.

Textile Mills

Ala., Anniston—Utica Knitting Co., Walnut St. at 21st St., reported, plans installing \$30,000 machinery, including 28 circular knitting machines.

Ga., Columbus—Chamber of Commerce, Ralston Cargill, Sec.-Treas., reported, nego-

tiating with outside capitalists for establishment hosiery mill.

Ga., Lindale—Pepperell Mfg. Co., 160 State St., Boston, Mass., advises purchased from Saco-Lowell Shops, 147 Milk St., Boston, 50,000 spindles which will be used as replacement for old machinery; no construction work to be undertaken.

N. C., Asheboro—Clyde Woods, Asheboro, reported, has contract for mill units for Cettwick Silk Mills; 3 stories; 55x50 ft.; conc. foundations; brick walls; comp. roof; \$100,000; R. O. Biberstein, Archt., 1614 E. M. Ave., Charlotte.

N. C., High Point—Wm. F. Lotz, Oxford Bank Bldg., Frankford, Philadelphia, Pa., Gen. Contr. for building for Adams-Mills Corp., advises following received contracts: Column mould, Deslauriers Column Mould Co., 233 Broadway, New York City; steel erector, D. G. Kersey, 901 Terrell St., Greensboro; misc. iron, Soule-Hoffman Co., 1906 S. Blvd., Charlotte; glass and glazing, Pittsburgh Plate Glass Co., 431 Hamilton St., High Point; roofing, Gate City Roofing Co., Railroad St., Greensboro; elevator, Salem Foundry & Machine Co., Salem, Va.; plumbing, Red Rowe Heating & Plumbing Co., 638 N. Main St., High Point; heating, W. W. Dick, 246 Bellemeade St., Greensboro; sprinklers, Grinnell Co., Inc., 30 E. Fourth St., Charlotte; electric, R. H. Bougligny, Inc., 509 W. Morehead St., Charlotte; hardware, Murta Appleton & Co., 12th & Sansom Sts., Philadelphia; Compo. flooring, J. L. Dobson, 20 E. Johnson St., Philadelphia; bricklaying, C. F. Ogburn, Winston-Salem; brick and tile, L. C. Isenhour, Colon; gypsum slab, Keystone Gypsum & Fireproof Co., N. American Bldg., Philadelphia; painting, Smith and Brown, High Point.

N. C., Newton—Clyde Fabrics, Inc., reported, acquired Clyde Mills, Inc.

N. C., Winston-Salem—Carolina Narrow Fabric Co., J. A. Kester, Pres., leased Geo. E. Nisson Waggon Works, Washington St.; manufactures electric insulating tape.

S. C., Lyman—A. E. Colby, Boston, Mass., Treas., Pacific Mills, announced bids for rein. conc. warehouse with 100,000 sq. ft. floor space and extension of bleach house of 12,000 sq. ft. will be received at office Lockwood Greene Engineers, Inc., Montgomery Bldg., Spartanburg, Sept. 12; erection of warehouse and extension of bleachery will give room for installation of 8 print machines and an increase of 50% in bleachery and dye plant capacity; extensive changes will be made in arrangement of present space and acquisition; present capacity of bleachery and dye plant 2,000,000 yds. weekly; total expenditure \$500,000.

Tenn., Chattanooga—Capitol Construction Co., Standard Bldg., Atlanta, Ga., has contract for addition mill building for Davenport Hosiery Mills; 1 story; 228x92 ft.; brick walls; struc. steel; rein. conc.; tar and gravel roof; Robert & Co., Inc., Engrs., Bona Allen Bldg., Atlanta, Ga.; contracts covering mech. equipment, fire protection, heating and boiler equipment let about Oct. 1.

Tenn., Cleveland—Hardwick Woolen Mills, H. B. Moore, V. P.-Gen. Mgr., erecting 2-story warehouse and carbonizing building; 60x180 ft.; rein. conc., brick, conc. and steel; W. H. Sears, Archt., Chattanooga; construction by company's forces; have equipment.

Water Works

Details of water works improvements in connection with the many LAND DEVELOPMENT operations will be found under that Classification.

D. C., Washington—Union Paving Co., Broad & Stiles Sts., Philadelphia, Pa., reported, low bidder at \$49,950, for constructing Anacostia reservoir, Fort Stanton Park; capacity 3,000,000 gal.

Ga., Tybee—Town, Thomas Gamble, Mayor, plans establishing water plant at Savannah Beach for fire protection.

Ky., Owingsville—City plans voting in Nov. on \$23,500 water bonds.

Miss., Vicksburg—Veterans Bureau, Atlanta, Ga., P. M. Feltham, Supt. of Construction, receives bids Sept. 15 for drilling additional well and laying water lines Veterans Hospital grounds.

Tex., Port Arthur—W. L. James & Son, 1927 Fifth St., Port Arthur, has contract for brick, central pumping station; cost \$18,500.

Virginia—U. S. Dept. of Agriculture, Bureau of Public Rds., let contract to Pitts-

burgh-Des Moines Steel Co., Pittsburgh, Pa., for water supply, terminus Mount Vernon Memorial Highway. 8-13

Va., Bedford—City plans installing booster pump.

W. Va., Charleston—West Virginia Water Service Co., 183 Summers St., reported, have hearing Sept. 10 at office of Fred W. Herman, U. S. Dist. Engr., for authority to construct storage dam at Mink Shoals. 7-23

Woodworking Plants

S. C., Greenville—Gallivan Building Co., Gallivan Bldg., reported, has contract for rebuilding Zinn Beck Bat Co.'s building at Paris; 100x60 ft.; wood. 8-20

FIRE DAMAGE

Fla., Frostproof—A. L. Matthews' residence.

Ga., Savannah—Savannah Beach Hotel, operated by Mrs. W. H. Bailey, owned by Sam Bernstein; Houck's Grocery; Long's Delicatessen; Mrs. Josephine Seay's residence; Knowles Drug Store; barber shop; loss \$50,000.

Md., Crisfield—Clifton Rayfield's residence near Crisfield.

Miss., Biloxi—Ocean Springs Ice & Coal Co.'s plant; loss \$30,000.

Mo., Hayti—Hayti Public Grade School; loss \$40,000.

Okla., Shawnee—Rosenfield Jewelry Co.; Congress Hotel; Ki-Ki Candy Co.; loss about \$100,000.

Tex., Galveston—Bldg. at 2219½ E St., occupied by hardware store of Robt. Lyons, Jr., loss \$75,000 to \$80,000; Nathan's women's clothing store, loss \$20,000; E. S. Levy's bldg., loss \$25,000; Salzman's Jewelry Store, loss \$10,000; Four Seasons Hotel, Marco Yurkovich, operator, loss \$50,000.

Tex., Hamlin—Building owned by W. D. Ferrell; second story of First National Bank, Eakin, Jones Dry Goods Co. and Mrs. C. C. etc.; loss \$75,000 to \$125,000.

Tex., Haskell—Judge W. H. Murchison's residence; loss \$12,000.

Va., Axton—Geo. T. Wian's store and storage house; loss \$15,000.

Va., Winchester—C. A. Wisecarver's dairy barn, Senseney Rd., near Winchester; loss \$10,000.

W. Va., Fairmont—Dairy barn and silo, Bunner Dairy Farm, Grafton Rd., East Side; loss \$10,000.

W. Va., Martinsburg—Jos. Crabbe's residence.

Md., Baltimore—Thos. Russow, care Stanislaus Russell, Archt., 11 E. Lexington St., erect brick residence and garage, 6622 Harford Rd.; drawing plans.

Okla., Oklahoma City—H. B. Sipe, 1824 W. 11th St., erect residence, 2200 block E. 19th St.

Va., Williamsburg—Marston Christian opens bids Sept. 10 for residence; L. P. Hartsook, Archt., Amer. Natl. Bank Bldg., Richmond.

Va., Williamsburg—Tom Antonodis erect residence; L. E. Warner, Archt.; ready for bids.

Government and State

Ark., Fayetteville—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens bids Sept. 23 for remodeling and enlarging post office.

Ark., North Little Rock, Little Rock—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., reported, opens bids Sept. 15 for \$110,000 post office and Federal bldg., Fifth and Main Sts. 6-4

Ark.-Tex., Texarkana—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, has low bid from Daley & Bickley, Texarkana, to clear site for \$750,000 post office, court house, etc. 8-20

D. C., Washington—Dist. Commrs., Dist. Bldg., have low bid at \$10,494 from Corson & Gruman Co., 33rd & K Sts., N. W., for excavating, grading and cinderling square 354, farmers' produce market site. 8-27

D. C., Washington—Architect of The Capitol, David Lynn, opens bids Oct. 21 for U. S. Supreme Court Bldg.; 103,000 sq. ft. with about 30,000 sq. ft. additional in terraces and driveways; central portion 5 stories and basement; side portions 3 stories and basement; fireproof, marble facing; inclined driveway from basement, elevators, ventilating system, public and private corridors; Cass Gilbert, Archt., 244 Madison Ave., New York; excavation and foundation contracts previously not let; drawings from office Mr. Lynn. 9-3

Fla., Miami—Additional prospective estimators on \$2,080,000 post office, etc., (except excavations, foundations, elevators, etc.), bids Sept. 15 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington: General—St. John Co., Box 436; Continental Construction Co., Exch. Bldg.; M. R. Harrison Construction Co., 500 N. E. 45th St., all Miami; Electro Construction Co., Inc., 211 Le Bron Ave., Montgomery, Ala.; W. P. Thurston Co., Inc., 301 S. Fourth St., Richmond, Va.; Great Lakes Construction Co., 333 N. Michigan Ave., Chicago, Ill.; Bellows-MacLay Construction Co., Construction Bldg., Dallas, Tex.; Elevators—Warner Elevator Manufacturing Co., 2613 Spring Grove Ave.; Shepard Elevator Co., 2413 Colerain Ave., both Cincinnati, O. 9-3

Ga., Atlanta—Fulton County Bd. of Commrs. plans to alter Fulton Tower (jail); \$40,000; cells for 60 additional.

Ky., Ashland—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, probably let contract first of year for 1-story limestone post office addition. 6-11

Ky., Harlan—Prospective estimators on post office, bids Sept. 17 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington: Samford Bros., Inc., 301 Washington Ave., Montgomery, Ala.; Hiram Lloyd Building & Construction Co.; Wm. MacDonald Construction Co., both Synd. Trust Bldg., St. Louis, Mo.; Fred R. Comb Co., 2113 Chicago Ave.; Phelps & Drake Co., Inc., Metropolitan Life Bldg., both Minneapolis, Minn.; Saml. Plato, Lyons, N. Y.; Dunlap & Co., Inc., Columbus, Ind.; Chas. H. Barnes, 312½ Fifth St., Logansport, Ind.; Boone, Eason & Wood, Inc., Bluefield, W. Va.; Earl E. Garber & Co., Bethlehem, Pa.; J. M. Dunn & Son, Depot and Broadway, Knoxville, Tenn.; Kellogg & Anderson, Sedalia, Mo.; Smith-Pew Construction Co., 435 Irwin St., N. E., Atlanta, Ga.; A. L. Powers, London, Ky.; A. F. Perry, Jr., Barnett Natl. Bank Bldg., Jacksonville, Fla. 8-27

Ky., Lexington—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, probably start work bet. Oct. 15 and Nov. 1 on \$5,000,000 Narcotic Farm; foundation work to be let first; specifications ready in about 3 weeks. 2-19

Md., Jessups—State Bd. of Welfare, Stuart S. Janney, Chmn., Baltimore, opened bids Sept. 9 to remodel and enlarge dining hall; seat 600 additional; Henry G. Perring, Archt.-Engr., Court Square Bldg., Baltimore. 7-30

BUILDING NEWS

BUILDINGS PROPOSED

Bank and Office

Fla., Jacksonville—N. G. Wade Investment Co., Atlantic Natl. Bk. Bldg., plans \$125,000 bldg., Blum St. and Robinson Ave.; rein. conc., 3 stories, 105x147 ft.

Tex., Dallas—Gulf States Life Insurance Company of Texas, W. J. Laidlaw, Pres., purchased 10-story Marvin Bldg., Main and Akard Sts.; add 6 stories, cost \$220,000; Lang & Wittich, Archts., First Natl. Bank Bldg.

Tex., Liberty—First National Bank opens bids Sept. 21 for rein. conc. and steel bank and office bldg.; \$50,000, 2 stories, mezzanine, 36x83 ft., conc., terrazzo and tile floors, built-up tar and gravel roof; elect. refrigerators, limestone, marble, metal doors, hollow tile, vaults, ventilators, wire glass, aluminum work; elevators in future; furnishings, equipment, etc., \$10,000; Corneli G. Curtis, Archt., 1637 Hawthorne St., Houston. 6-4

Churches

Mo., Kansas City—Bethany Baptist Church, Scarritt and Lawndale Aves.; soon call for bids; enlarge auditorium, erect 3-story Sunday school; Classic type, 2 stories and basement, gray buff brick; Luther Orville Willis, Archt., 502 Delmain Bldg.

Mo., Kansas City—East Side Presbyterian Church, U. S. A., Frank F. Vance, Chmn., Bldg. Comm., 4900 E. 22nd St., erect 2 bldgs., Van Brunt Blvd. and 23rd St.; \$90,000; \$55,000 first unit 2 stories, auditorium seat 350, chapel seat 150; \$35,000 main auditorium 1 story and balcony, seat 450; both brick, cut stone trim; Felt, Dunham & Kriehn, Archts., 300 W. 47th St.

Tex., Luling—Baptist Church, Rev. J. J. Strickland, Pastor, erect \$50,000 educational bldg.; 3 stories, conc. and hardwood floors, rolling partitions, asbestos shingle and built-up roof; Kramer & Kerr, Archts., 709 Burt Bldg., Dallas; date of bids not definite. 8-27

Tex., San Angelo—Christian Science Society let contract at \$10,175 to H. L. McBride for church, Ave St. and Avenue B; English stucco, seat 164; Korn & Alexander, Archts.

Va., Waynesboro—T. J. Collins & Son, Archts., Staunton, Va., completed plans for church; bids Sept. 9.

City and County

Ark., DeWitt—Arkansas County Bd. of Commrs. start work on \$55,000 court house; H. Ray Burks, Archt., Wallace Bldg., Little Rock; Bird Construction Co., Contr., Searcy. 6-25

Ark., Murfreesboro—Pike County Bd. of Commrs. start work about Oct. 15 on \$50,000 court house; stone, brick, terra cotta trim, 3 stories, 68x72 ft., conc. foundation, comp. roof; Witt, Seibert & Halsey, Archts., Texarkana, Ark.-Tex. 12-18

Tex., Houston—City, J. N. Nagle, City Engr., City Hall, soon call for bids for 2 fire stations, No. 3, Crockett and Colorado Sts., and No. 5, 910 Hardy St.; brick and stucco, 2 stories, conc., pine and terrazzo floors, rein. conc. foundations, asbestos shingle roofs, hollow tile, ventilators, \$10,000 each. 8-27

Tex., Longview—Gregg County, W. R. Hughes, County Judge, erect \$160,000 brick and stone court house and jail; hardwood and comp. floors, metal ceilings, plaster board, asbestos shingle roof, vaults, vault lights; architect not selected; bonds voted. 9-3

Va., Danville—Fred B. Fuqua & Co., Krise Bldg., Lynchburg, Va., estimating on \$120,000 armory-auditorium, bids Sept. 22 by City Council; J. Bryant Heard, Archt., Masonic Temple Bldg. 9-3

W. Va., Parkersburg—City Council opens bids Sept. 22 for fire stations Nos. 2 and 3, 16th and Covert Sts., and Virginia Ave. near Dudley Rd.; brick, 2 stories.

Dwellings

Fla., Miami Beach—N. Johnson has permit for \$10,000 residence, 3773 Pine Tree Drive.

Fla., Miami Beach—John A. Jernigan, Agt., Olympia Bldg., considers erecting several dwellings; \$10,000 each; Arthur Laidlaw-Jones, Archt., 816 Huntington Bldg., Miami.

Fla., Yankeetown—Charles Merryweather, 7023 Vernon Ave., Chicago, Ill., plans residence.

Md., Baltimore—L. W. Clifford, 4700 Liberty Heights Ave., erect \$10,000 store and apartment, same location; brick, 2 stories; W. F. Clarke, Archt., 4704 Liberty Heights Ave.

N. C., Lumberton—Additional prospective estimators on post office, bids Sept. 11 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C. Milton Construction & Engineering Corp., 141 Milk St., Boston, Mass.; Virginia Engineering Co., Inc., First Natl. Bank Bldg., Newport News, Va.; O. F. Williams, 1015 Lexington Ave.; J. A. Jones Construction Co., Commr. Bank Bldg., both Charlotte, N. C.; Beaman-Coleman Construction Co., Capital Club Bldg.; J. N. Bryan & Son, Rogers Bldg., both Raleigh, N. C.; Wm. L. Redditt, McClatchy Bldg., Upper Darby, Pa.; Algernon Blair, First Natl. Bank Bldg., Montgomery, Ala.; L. S. Bradshaw, Salisbury, N. C.; Wm. W. Sistler Construction Co., Simpson, Ill.; Joe McCarthy & Sons, Spartan Bldg., Pana, Ill.; W. W. Dick, 244 Bellemeade St.; J. L. Crouse, Box 642, both Greensboro, N. C.; Wm. MacDonald Construction Co., St. Louis, Mo.; Wm. Muirhead Construction Co., First Natl. Trust Bldg., Durham, N. C.; W. H. Bounds, W. Main St., Bennettsville, S. C.

N. C., Rutherfordton—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., has low bid at \$46,880 from Arthur F. Perry, Jr., Inc., Bisbee Bldg., Jacksonville, Fla., for post office. 8-13

Tenn., Chattanooga—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., opens bids Sept. 14 to clear site for \$1,000,000 Federal bldg., Georgia Ave.; R. H. Hunt Co., Archt., James Bldg., Chattanooga; Shreve, Harmon & Lamb, Asso. Archts., 7 E. 44th St., New York. 8-20

Tenn., Tullahoma—U. S. Property & Disbursing Officer for Tennessee, State Capitol Bldg., Nashville, receives bids until Sept. 26 for 6 bath and latrine bldgs.

Tex., Kingsville—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, has site for post office.

Tex., Wichita Falls—Additional prospective estimators on \$750,000 post office, etc., bids Sept. 21 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington: National Contracting Co., 2114 Foshay Tower; Libby & Libby Co., 244 Eighth Ave. S.; Crown Iron Works, all Minneapolis, Minn.; J. P. Cullen & Sons, Inc., Box 272, Janesville, Wis.; James Devault, Massillon Rd., Canton, Ohio; C. S. Lambie & Co., Amarillo Bldg., Amarillo, Tex.; C. L. Shaw & Co., 767 S. Lamar St.; A. J. Rife Construction Co., 1913 N. Harwood St.; H. W. Underhill Construction Co.; P. O'B. Montgomery; Bellows-Maclay Construction Co.; Chisty-Dolph Construction Co.; F. A. Mote, all Construction Bldg., all Dallas, Tex.; Holmboe Construction Co., Petroleum Bldg., Oklahoma City; Mead & Mount Construction Co., Denver Natl. Bank Bldg., Denver, Colo.; McCarthy Bros. Construction Co., Delmar and Euclid Ave.; Wm. MacDonald Construction Co., Synd. Trust Bldg., both St. Louis, Mo.; James T. Taylor, First Natl. Bldg., Fort Worth, Tex.; Henry B. Ryan Co., 500 N. Dearborn St.; Reliance Elevator Co., 212 Kinzie St.; Joseph A. Holpugh Co., 4010 W. Madison St.; Kralh Construction Co., 350 N. Clark St., all Chicago, Ill.; Joseph E. Morgan & Son, 319 Texas St., El Paso, Tex.; Ed. S. Moore & Son, 610 N. Washington St., Kokomo, Ind.; Gordon Walker, Rector Bldg., Little Rock, Ark.; Kaiser-Ducett Co., Rialto Square Bldg., Joliet, Ill.; Atlantic Elevator Co., Erie Ave. and D St.; Westinghouse Electric Elevator Co., both Philadelphia, Pa.; American Elevator and Machine Co., 500 E. Main St., Louisville, Ky.; A. B. See Elevator Co., Inc., 1343 H St., N. W.; Haughton Elevator & Mach. Co., Vermont Bldg.; Otis Elevator Co., 810 18th St., N. W.; Gurney Elevator Co., Inc., 1423 H St., N. W., all Washington, D. C.; Elevator Locks Co., 119 N. Washington St., Peoria, Ill.; O. M. Gwin Construction Co., 3503 Fern St., New Orleans, La.; Thomas L. Dawson, 2035 Washington St., Kansas City, Mo., and James I. Barnes, Logansport, Ind. 9-3

Va., Norfolk—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., probably call for bids in Oct. to clear site for \$1,500,000 Federal bldg., Bute St., Brambleton Ave., Monticello Ave. and Granby St.; stone, 2 passenger elevators; Benjamin F. Mitchell, Arcade Bldg., Wickham C. Taylor, Ctt. Bank Bldg., and Rudolph, Cooke & Van Leeuwen, Arcade Bldg., asso. archts. 4-16

W. Va., Huntington—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., selected Robt. J. Willett, Huntington, as architect for post office and court house. 3-12

Hospitals, Sanitariums, Etc.

Ga., Augusta—Prospective estimators on clinical bldg., U. S. Veterans Hospital, bids Sept. 22 by Veterans Administration, Arlington Bldg., Washington; General—Smallman-MacQueen Construction Co., 1109 Fifth Ave., Birmingham, Ala.; Murphey Pound, P. O.

Box 422; H. B. Nelson Construction Co., 120 Owsley Ave., both Columbus, Ga.; Murch Brothers Construction Co., Ry. Exch. Bldg., St. Louis, Mo.; W. P. Thurston Co., Inc., 301 S. Fourth St., Richmond, Va.; W. P. Rose Co., Wayne Natl. Bk. Bldg., Goldsboro, N. C.; W. Geary & Son; John C. Heslep, Carolina Bank Bldg., both Columbia, S. C.; Capital Construction Co., Standard Bldg.; Grahm Construction Co., Red Rock Bldg.; Norwood-Griffin Co., Bona Allen Bldg., all Atlanta; Gallivan Construction Co., Gallivan Bldg., Greenville, S. C.; Rogers & Leventhal, Box 173, Chattanooga, Tenn.; R. P. Farnsworth & Co., Inc., New Orleans, La.; C. M. Guest & Sons, Sharpe St., Anderson, S. C.; Samford Brothers, Inc., 301 Washington Ave., Montgomery, Ala.; Claussen-Lawrence Construction Co., 1394 Gwinnett St., Augusta, Ga.; Angle-Blackford Co., Amer. Bk. Bldg., Greensboro, N. C.; John M. Geary Co., Arcade Bldg., Asheville, N. C.; North-Eastern Construction Co., Nissen Bldg., Winston-Salem, N. C.; Batson-Cook Co., West Point, Ga.; Dawson Engineering Co., Inc., 10 Gillon St., Charlotte, S. C.; Adams Construction Co., Woodward Bldg.; United Construction Co., both Washington, D. C.; Jas. I. Barnes, Springfield, Ohio.

Electric—Ray A. Phelps, Beloit, Wis.; J. M. Clayton Co., Atlanta, Ga.; Young Electric Works, 857 Reynolds St., Augusta, Ga.

Elevator—Shepard Elevator Co., 2413 Coleman Ave.; Warner Elevator Mfg. Co., 2613 Spring Grove Ave., both Cincinnati, Ohio; Westbrook Elevator Co., Inc., Spring St., Danville, Va.; Salem Foundry and Machine Works, Salem, Va.; Otis Elevator Co., 39 Harris St., N. E.; Weekley Elevator Co., Bona Allen Bldg., both Atlanta, Ga.; A. Kieckhefer Elevator Co., 1026 St. Paul Ave.; S. Heller Elevator Co., both Milwaukee, Wis.; American Elevator & Machine Co., 500 E. Main St., Louisville, Ky.

Plumbing and Heating—E. J. Erbeling & Sons, 553 Broad St.; Thomas G. Brittingham, 651 Broad St.; O. J. Gleason; W. H. Weatherford Plumbing and Heating Co., 603 Broad St., all Augusta, Ga.; Bryce Plumbing and Heating Co., Inc., Florence, S. C.; W. H. Bond Co., Inc., 318 S. Harrington St., Raleigh, N. C.; Hillard Heating and Plumbing Co., P. O. Box 630, Atlanta, Ga.; also Joe B. Martin, 211 Kinney Bldg., Charlotte, N. C. 8-20

Mo., Springfield—Dept. of Justice, Sanford Bates, Director, Bureau of Prisons, Washington, probably call for bids about Oct. 22 for first unit of \$2,500,000 hospital for defective delinquents; Joannes & Marlow, 420 Lexington Ave., New York, archts. for main portion; Alan B. Mills, 15 E. 47th St., New York, archt. for tubercular unit. 8-20

Okl., Clinton—Dept. of Interior, Bureau of Indian Affairs, Washington, completed plans for \$90,000 hospital, Cheyenne-Arapahoe Indian Reservation; soon call for bids.

Tenn., Bolivar—State, Richard H. Lyle, Commr. of Institutions, Nashville, selected Henry C. Hibbs, Nashville, as archt. for 2 bldgs., West Tennessee State Hospital for Insane; also renovate heating and lighting plant; \$500,000. 7-23

Va., Norfolk—City Council erect dormitory, Municipal Hospital; fireproof, 2 stories, accommodate about 160; \$85,000, including equipment and heating plant for new and old dormitory; Wickham C. Taylor, Archt., Citizens Bank Bldg.; plans drawn; soon call for bids.

Va., Richmond—City Council receiving bids for \$80,000 tuberculosis pavilion, Pine Camp Sanatorium; 50 beds; Carneal, Johnston & Wright, Archts., Electric Bldg. 8-20

Hotels and Apartments

Ala., Livingston—Livingston Hotel Co., Jas. A. Mitchell, Chmn., Bd. of Directors, having plans drawn by Wm. Leslie Welton, 19th floor, Amer.-Traders Bldg., Birmingham, for brick hotel; 2 stories and basement, 60x150 ft., cast stone, elec. refrigerators, hardwood, linoleum, terrazzo and comp. floors, in-

cinerator, marble, plaster board, asphalt shingle and built-up flat roof, steel sash, ventilators.

N. C., Atlantic—Manufacturers Trust Co., New York, J. Lawrence Gilson, Vice-Pres., erect hotel, Atlantic Beach; 50 bedrooms, dining room, sun room and lobby; Thos. Herman, Archt., care Gladding & Herman, Wilson; R. W. Corden, Mgr., Atlantic Beach; probably let contract during Sept.

Va., Lynchburg—Apartment-Hotel Corp. erect \$56,000 bldg., Court and Seventh Sts.; brick, 103x40 ft., fireproof walls.

Miscellaneous

Tex., Seguin—Max Starcke and Paul Goetz let contract at \$12,874 to Henry Weiss, Seguin, for mortuary; Marvin Elckenroht, Archt., 710 Maverick Bldg.; J. W. Beretta Engineers, Inc., Engrs., Natl. Bk. of Commerce Bldg., both San Antonio. 8-27

Railways Stations, Sheds, Etc.

Va., Newport News—Railway Express Agency, G. J. Dye, Southern Constr. Supvr., 325 Mitchell St., S. W., Atlanta, Ga., erect bldg.; brick, conc. foundation, terra cotta trim, 1 story and basement, 77x63 ft., tile and linoleum floors, struct. steel, metal windows and trim, Johns-Manville or Carey roof; owner builds.

Schools

Ark., Mena—Western Arkansas Junior Agricultural College opens bids Sept. 14 for \$40,000 main bldg.; native stone, 2 stories; Clyde A. Ferrell, Archt., 1006 W. Sixth St., Little Rock. 6-11

Ga., Athens—University of Georgia opened bids Sept. 9 for dormitory and law bldg.; Hentz, Adler & Shutze, Archts., 1330 Candler Bldg.; H. J. C. Pearson, Engr., Mortgage Guarantee Bldg., both Atlanta.

La., Lake Charles—Calcasieu Parish School Bd. selected Herman J. Duncan, 120 Murray St., Alexandria, as architect for \$75,000 brick Lagrange school. 7-23

Md., Loch Raven—Md. Training School for Boys Bd. of Mgrs., opens bids Sept. 11 for Charles Cottage; Henry Powell Hopkins, Archt., 10 E. Mulberry St., Baltimore.

Tex., Galveston—Galveston Public Schools, John Neethle, Pres., Bd. of Trustees, City Hall, soon complete plans for \$300,000 to \$350,000 Junior High School; fireproof, Giescke & Harris, Norwood Bldg., Austin, and R. R. Rapp, Guar. Bldg., Galveston, Asso. Archts.; L. D. Royer, Mech. Engr., 911 Smith-Young Tower, San Antonio. 6-4

Tex., Sugarland—School Bd. erect \$75,000 high school; \$25,000 from bonds; remainder donated.

Va., Lexington—Sigma Chi Fraternity erect fraternity house; Clark & Crowe, Archts., Krise Bldg., Lynchburg; bids Sept. 3.

Stores

Fla., Miami Beach—Wofford Hotel, Mrs. Oro B. Wofford, may erect 1-story bldg., rear of hotel for drug store.

Warehouses

Ala., Attalia—Southeastern Warehouse & Cotton Co., owned by Anderson, Clayton & Co., Houston, Tex., reported, plans 2 additional warehouses, each 160x180 ft.

Ga., Atlanta—Montag Bros., Inc., 182 Marietta St., N. W., erect storage bldg., Magnolia St., N. W.; brick, struc. steel and corrugated iron roof, 1 story, 71x114 ft., plans by C. C. Whittaker, Engr., 616 Bona Allen Bldg.; bids Sept. 5.

Tenn., Johnson City—L. H. Phetteplace construct tobacco prizeing warehouse.

BUILDING CONTRACTS AWARDED

Bank and Office

D. C., Washington—Following sub-contracts let on \$1,000,000 Standard Oil Co. office bldg., on which conc. foundations being placed: Wrecking, Hechinger Housewrecking Corp., 15th & H Sts., N. E.; rein. conc. and cement work, Fred Drew Co., Inc., 2539 Pa. Ave., N. W.; struc. steel erection, McDonald Steel Erecting Co., Inc., 356 L St., S. W.; granite and setting stone, McLeod & Romberg

Stone Co., Inc., Bladensburg, Md.; brick work, tile and partitions, D. C. Butcher Co., Rust Bldg.; plumbing, heating and ventilating, Standard Engineering Co., 2129 I St., N. W.; elect. work, Harry Alexander, Inc., 1800 E St., N. W.; elevators, Otis Elevator Co., 810 18th St., N. W., all Washington; struc. steel, American Bridge Co., Ambridge, Pa.; limestone, Indiana Limestone Co., Bedford, Ind.; metal windows, Campbell Metal Window Corp., Bush & Hamburg Sts.; mar-

ble, tile and terrazzo, Hilgartner Marble Co., Sharp & Ostend Sts., both Baltimore, Md.; hollow metal work, Art Metal Construction Co., Jamestown, N. Y.; vault doors and safes, York Safe & Lock Co., York, Pa.; conveyors, Link Belt Co., 233 Broadway; laundry equipment, American Laundry Mach. Co., 989 Sixth Ave., both New York; Clyde N. & Nelson Friz, Archts., Lexington Bldg., Baltimore; Lynn Rosebrook, company architect, 26 Broadway, New York; Herman F. Doeleman, Struct. Engr., Balto. Trust Bldg.; Reeder, Elzer & Akers, Mech. Engrs., 916 N. Charles St., both Baltimore. 7-30

Tenn., Lewisburg—First National Bank let contract to Nile E. Yearwood, Fayetteville, for \$25,000 bank and office bldg.; brick and stone, marble, hardwood, linoleum and tile floors, conc. foundation, comp. built-up flat roof, cast stone, elec. refrigerators, metal doors, steel sash and trim, vaults, vault lights, ventilators, wire glass, brass and bronze work; furnishings, equipment, etc., \$10,000; Douougherty, Wallace & Clemmons, Archts.; Harold C. Wallace, Engr., both Cotton States Life Bldg., Nashville. 7-9

Churches

Fla., Miami—Holy Trinity United Lutheran Church, F. S. Haugen, Chmn., Bldg. Comm., erect \$10,000 bldg., S. W. Eighth Ave. and Second St.; frame and stucco, linoleum, quarry tile and wood floors, steel sash, comp. shingle roof; Harold H. Mundy, Archt., 28 N. W. Eighth Ave.; day labor.

Miss., Meridian—Federated Presbyterian Church let contract to McArthur & McLeMore, 611 22nd Ave., for \$25,000 bldg., 28th Ave. and Ninth St.; rein. conc. foundation, comp. and wood floors, asbestos shingle roof, cast stone trim, misc. iron, steel and sheet metal work; R. C. Springer, Archt., Rosenbaum Bldg. 7-2

City and County

N. C., Waynesville—Haywood County Bd. of Commrs. let contract at about \$167,000 to Southeastern Construction Co., 210 W. Second St., Charlotte, for court house; fireproof, 3 stories and basement, rein. conc., struct. steel, brick and tile, stone trim, comp. roof, steam heat, elec. work, City Electric Co., Charlotte, at \$6800; plumbing and heating, E. B. Wright, Asheville, \$15,000; Willard G. Rogers, 510 East Boulevard, and N. G. Rhodes, both Charlotte, Archts. 8-27

Okla., Tulsa—City, Earl Logan, Auditor, erect \$35,000 shop bldg. and addition to administration bldg., Mohawk Park; A. J. Love & Co., Archts., Atco Bldg.; Acme Construction Co., Contr., 506½ S. Main St.

W. Va., Clarksburg—Harrison County Court let contract at about \$450,700 to Hutter Construction Co., Fond du Lac, Wis., for court house; fireproof, 110x130 ft., 6 stories; Walker & Weeks, Archts., 11001 Euclid Ave., Cleveland, O.; Carleton C. Wood, Asso. Archt., Lowndes Bldg., Clarksburg. 8-20

Dwellings

Fla., Miami Beach—J. A. Turrell, Newton, Mass., erect \$22,000 residence, garages, etc., 4425 N. Meridian Ave.; rein. conc. block and stucco, steel sash, tile and wood floors, tile roof; Robt. E. Collins, Archt.; C. R. Clark Co., Contr., 925 Lincoln Rd., Miami Beach.

Fla., Miami—Wm. Williams, Akron, O., erect \$40,000 residence, 4465 N. Meridian Ave.; rein. conc., conc. block and stucco, tile roof, tile and hardwood floors, orna. iron and stone, 2 stories; Lester Avery, Archt.; Wilbert Harborn, Contr., 2618 N. Greenway Dr., Coral Gables.

Fla., Miami—Chas. J. Davol, care Davol Land Co., 69 Point St., Providence, R. I., let contract at about \$50,000 to J. T. Gooch & Co., Bedford Bldg., N. E. First St., for residence, garage, etc., Brickell Ave.; John Bullen, Archt., Bastian Bldg., 825 Lincoln Rd., Miami Beach. 7-23

Fla., Miami Beach—Col. E. H. R. Green, New York, and 46 Star Island, Miami Beach, let contract at \$80,597 to Deigaard Builders, Inc., 2975 S. W. Eighth St., Miami, Fla., for wing to residence, Star Island; elect. work, Brown Electric Co., 730 Collins Ave., Miami Beach, at \$2058; plumbing and heating, Markowitz & Resnick, Inc., 839 W. Flagler St., Miami; 83x89 ft.; sleeping quarters, dressing rooms and baths, elevator, bronze sash; Klehnel & Elliott, Archts., Seybold Bldg., Miami. 7-16

Ga., Atlanta—Mrs. Rosa Lee Romm, 934 St. Charles Ave., N. E., erect \$10,000 residence, 1318 Fairview Rd., N. E.; brick veneer, 2 stories; day labor.

Ga., Atlanta—Rufus Purcell, 1487 Highland Ave., N. E., erect brick veneer residence, 1686 Noble Drive, N. E.; 1 story, 2 baths,

hardwood and tile floors, comp. roof, steam heat; owner builds.

Ga., Atlanta—E. E. Ellis, 330 Peachtree St., N. E., let contract to Morris & Brown, 425 Courtland St., N. E., for residence, 882 Glenn Arden Way; comp. roof, hot air heat.

Ga., Atlanta—E. L. Guyol, 332 Ponce de Leon Ave., let contract to A. C. Humphreys, 338 W. Hill St., for residence, Pelham Rd.; brick veneer, 2 stories and basement, oak floors, comp. shingle roof; J. M. Russell, Archt., 907 Standard Bldg. 8-27

La., New Orleans—E. L. Markel, 3838 Louisiana Ave. Pkwy., erect dwelling, Claiborne Ave. near Broadway.

Md., Baltimore—Frank W. Krebs, 2111 Belair Rd., completed plans for 3 conc. block dwellings, 3110-14 Westfield Ave.; owner builds.

Md., Baltimore—Geo. A. Kinnear, 5403 Morella Rd., erect shingle duplex, 2826 Rosalie Ave.; W. H. Ziemer Realty Co., Contr., 1113 W. Lanvale St.

Md., Baltimore—Mrs. Louis Natale, 2930 Woodland Ave., erect \$10,000 residence and garage, Chulmleigh Rd., Stoneleigh; Kenneth C. Miller, Archt., 206 E. Lexington St.; Peyton B. Strobel Construction Co., Contr., 206 E. Lexington St.

Md., Baltimore—Milton R. Lerch, 5200 Harford Ave., erect 4 brick dwellings, 4303 and 4303-05 Walther Ave.; total \$20,000; owner builds.

Mo., Kansas City—J. Frank Goodenow, Pres., Goodenow Textiles, Inc., 3708 Main St., started work on residence, Lake Quivira; stone, brick and half-timber, 2 stories; R. L. Falkenberg & Co., Contrs., 63rd St. & Brookside Blvd.

Mo., St. Louis—Geo. W. Kreeghauser, 6604 Itaska St., erect brick residence and garage, same site; \$11,000, brick, 2 stories, slate roof, vapor heat; Marcel Boulicault, Archt., Ambassador Bldg.; Kirby Reppell, Contr., 1025 Central St.

N. C., Newton Grove—Redemptorist Fathers let contract at about \$21,000 to W. P. Rose Co., Wayne Natl. Bank Bldg., Goldsboro, for rectory and dormitory; brick and tile, steel joists, comp., hardwood and tile floors, asbestos shingle, built-up and possibly slate roofs, 50x80 ft., oak and tile floors; Jas. A. McGeady, Archts., Wilson. 8-27

N. C., Pinehurst—Edw. King erecting \$18,000 residence, Linden Road; frame, about 12x64 ft.; furnishings, equipment, etc., \$4000; A. B. Yeomans, Archt., Southern Pines; A. B. Saly, Engr.-Contr., Pinehurst.

Okla., Oklahoma City—Following sub-contracts let on \$150,000 residence for John A. Brown, 112 E. 10th St.: Millwork, Tibbs-Dorsey Millwork Co., 911 S. Walker St.; stone, Harter Marble-Crete Stone Co., 1614 1726 S. Agnew St., and J. B. Klein Iron & Foundry Co., 1004 W. Second St.; plumbing and heating, Hanson Bros., 1014 N. Robinson St.; wiring, McElDowney & Son, 111 N. Broadway; tile roofing, Swanda Bros., 510 W. Second St., all Oklahoma City; brick, Gattie Bros., San Antonio, Tex.; Chas. T. Aubon, Oklahoma City, and Atlee B. & Robt. M. Ayres, Smith-Young Tower, San Antonio, Archts.; F. M. Ray, Contr., 200 W. 22nd St., Oklahoma City. 7-30

Va., The Plains—W. R. Grace excavating for \$70,000 residence near The Plains; frame and stucco, 2 stories, clay tile roof; Jas. W. O'Connor, Archt., 162 E. 37th St., New York; J. R. Jones & Conquest, Inc., Contrs., Amer. Natl. Bank Bldg., Richmond. 9-3

Government and State

D. C., Washington—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., let contract at \$618,730 to McCloskey & Co., Inc., 1620 W. Thompson St., Philadelphia, Pa., for excavations and foundations for \$4,500,000 Department of Labor and \$4,750,000 Interstate Commerce Commission bldgs., with preliminary excavations for connecting wing; Arthur Brown, Jr., Archt., 251 Kearny St., San Francisco, Calif. 8-13

D. C., Washington—American Elevator & Machine Co., 500 E. Main St., Louisville, Ky., has contract at \$43,721 to replace elevator machinery in east and west wings, Dept. of Agriculture bldg.

Ky., Murray—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, let contract at \$71,900 to Samford Bros., Inc., 301 Washington Ave., Montgomery, Ala., for post office. 7-30

La., New Orleans—Jones & Laughlin Steel Corp., Pittsburgh, Pa., has contract for about 100 tons struct. steel for conversion of bldg. for Federal prison; rein. steel, C. T. Patterson Co., Inc., 800 S. Peters St.; shoring, Abry Bros., 3332 St. Ann St. Diboll & Owen,

Ltd., Archts., Canal Bank Bldg.; Gervais F. Favrot, Contr., Balter Bldg., all New Orleans. 9-3

Md., Baltimore—State Bd. of Welfare, Stuart S. Janney, Chmn., let contract to J. S. Thorn Co., 20th & Allegheny Sts., Philadelphia, Pa., Walter S. Brauns, representative, 509 N. Charles St., Baltimore, for 58 steel casements for penitentiary; \$20,000. 7-30

Okla., Helena—State Bd. of Public Affairs, Oklahoma City, let contract at \$16,000 to Grant M. Buxton, Enid, for dining hall, Western State Orphanage; Layton, Hicks & Forsyth, Archts., Braniff Bldg., Oklahoma City. 8-27

Okla., Hobart—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, let contract at \$67,400 to Upchurch Construction Co., Montgomery, Ala., for post office. 9-2

S. C., Columbia—State Penitentiary Bd. of Directors, Jas. N. Pearman, Supt., let contract at \$41,472 to C. M. Guest & Sons, Sharpe St., Anderson, for 3-tier steel cell block; 16½x102 ft., 102 cellss J. B. Urquhart, Archt., Central Union Bldg. 8-20

Tex., Anthony, R. D. from Savor—Following subcontracts let on \$400,000 Federal House of Detention near Anthony, for Dept. of Justice, Bureau of Prisons, Washington, D. C., on which preliminary excavation and grading completed and conc. footings poured: Brick materials, El Paso Brick Co., Smelter St.; conc. admixture, Johns-Manville, 2200 Wyoming St.; drayage, H. B. Goetting, 2412 N. Campbell St.; excavation, H. G. Van Hase-len; elevators and dumbwaiters, C. C. Gaines, First Natl. Bank Bldg.; hardware, Momsen, Dunnegan, Ryan, 801 E. Overland St.; nails, Peterson Lumber Co., 1630 Texas St.; rein. steel and mesh, Darbyshire-Harvie Iron & Machinery Co., 701 S. Florence St.; steel rolling doors, C. C. Gaines, First Natl. Bank Bldg.; lumber, Rio Grande Lumber Co., 801 S. Stanton St.; millwork, El Paso Sash & Door Co., 2200 Mills St.; chalk trough, C. C. Gaines, First Natl. Bank Bldg.; vault doors, Tvisot & Sote Co., 216 N. Campbell St.; plastering, Ralph Braem; roofing, S. W. Sash & Door Co., 405 Mills St.; sheet metal, H. Welsch & Co., 1008 Myrtle Ave.; insulation, Neff-Stiles, 401 N. Santa Fe St.; metal toilet partitions, El Paso Building Material Co., 2910 Durango St.; linoleum, Imperial Furniture Co., 116 S. Stanton St., all El Paso, Tex.; conc. chimney, Weber Chimney Co., 332 S. Michigan Ave., Chicago, Ill.; cast stone, Northwestern Terra Cotta Co., Denver, Colo.; metal pans, Earl E. Jones, 2915 Plumb St.; glass and glazing, Binswanger & Co., 1007 N. Main St., both Houston, Tex.; struc. steel, Ingalls Iron Works Co., Birmingham, Ala.; misc. and orna. iron and jail equipment, Weaver Ornamental Iron Works, 1801 Carter St.; metal doors and windows, A. W. Nichols, 410 Construction Bldg., all Dallas, Tex.; form lumber, California Panel & Veneer Co., 955 Alameda Ave., Los Angeles, Tex.; blackboard, Godart Construction & Equipment Co., Bldrs. Exch. Bldg.; screens, Wm. E. Seng, Bldrs. Exch. Bldg., both San Antonio, Tex.; painting, Brasted Lacquer & Spray Equipment Co., Wichita, Kan.; plumbing, H. G. Persons, Oliver Eakle Bldg.; wiring, Broome Elect. Co., 515 Tyler St., both Amarillo, Tex.; project comprises main bldg. with hospital section, 2 dormitories, 2 cell blocks, recreation hall, administrative bldg., kitchen, mess hall and assembly hall, laundry, shops and boiler house; all bldgs. but laundry 2 stories, about 300x300 ft., cement floors, conc. foundations, asbestos shingle and tile roofs. Trost & Trost, Archts.-Engrs., Two Republics Bldg. 7-23

Tex., Houston—Following sub-contracts let on \$525,000 post office and court house extension and remodeling: Mortar color, Reardon Co., 2204 N. Second St., St. Louis, Mo.; gypsum blocks, United States Gypsum Co., Santa Fe Bldg.; waterproofing and damp-proofing, Master Builders Co., Const. Bldg.; comp. tile flooring, Thomas Moulding Floor Co., Box 5022; rein. steel and mesh, Southern States Steel Co., 503 Haskell Ave.; marble, Vermont Marble Co. of Texas, 1513 Wall St., all Dallas, Tex.; Transit Mix concrete, Transit Mix Concrete Co. of Texas; sand, gravel and cement, Houston Building Material Co.; excavation, Houston Transportation Co., 406 Old Post Bldg.; sheet piling, Carnegie Steel Co., P. O. Box 1740; expansion joints, Haden Co., 1720 Shepherd St.; millwork, Enochs Lumber & Manufacturing Co., 708 Marine Bank; linoleum and cork carpet, G. A. Stowers Furniture Co., 820 Fannin St.; struct. steel erection, A. O. Krell, 609 Post-Dispatch Bldg.; glass and glazing, Binswanger & Co., 1107 N. Main St.; struct. steel, Houston Structural Steel Co., 3910 Washington St., all Houston; metal money drawers, General Fireproofing Co., 516 Arcade Bldg.; skylight, P. M. Bruner Granitoid Co., 425 Frisco Bldg., both St. Louis, Mo.; floor hardener, Sales Service Co., Bldrs. Exch. Bldg., San Antonio; hardware, P. & F. Corbin, P. O. Box 994, New Orleans, La.; floor clips and

wall plugs, C. C. Gaines, First Natl. Bank Bldg.; vault doors, Tri-State Safe Co., 216 N. Campbell St., both El Paso, Tex.; wood block flooring, E. E. Davis Co., 2244 Calumet Ave.; terra cotta, Midland Terra Cotta Co., 105 W. Monroe St., both Chicago, Ill.; misc. and orna. iron, Southern Ornamental Iron Works, Arlington, Tex.; steel sash, Detroit Steel Products Co., 2250 E. Grand Blvd., Detroit, Mich.; steel rolling curtain, Cornell Iron Works, Inc., 36-20 13th St. (Marion St.), Long Island City, N. Y.; painting, Brasted Lacquer & Spray Equipment Co., 452 N. Main St., Wichita, Kan.; elect. work, Eugene Ashe Electric Co., 505 Jones St., Fort Worth, Tex.; Robt. E. McKee, Contr., 1900 Texas St., El Paso. 8-6

Tex., San Antonio—Alamo Cavalry Club, 124 Cavalry Unit, National Guard, let labor contract to W. O. Anderson for stable, Exposition Grounds; frame and corrugated iron; material by owner; Ralph H. Cameron, Archt., Majestic Bldg. 8-27

Tex., Sugarland—American Laundry Machinery Co., Kirby Bldg., Dallas, has contract at \$9466 for laundry machinery for Central Texas Prison Farm near Sugarland; packing plant equipment, Voss & Kooek, Austin, at \$16,975. 7-30

Hospitals, Sanitariums, Etc.

Mo., Independence—Independence Sanitarium Hospital Bd., Mayor Roger T. Sermon, City Hall, Vice-Pres., expects to resume work in few days on \$500,000 Community Hospital, Van Horn and Forest Sts.; 7 stories; frame-work completed, brick to fourth floor; 163x43 ft. with four 43x11-ft. wings; furnishings, equipment, etc., \$70,000; Henry C. Smith, Archt., Independence Auditorium; L. W. Weeks, Contr., 633 S. Fuller St. 8-21-30

Okla., Enid—State Bd. of Public Affairs, Oklahoma City, let contract at \$18,675 to McMillen Construction Co., Enid, for hospital addition; Layton, Hicks & Forsyth, Archts., Braniff Bldg., Oklahoma City. 8-27

Okla., Norman—State Bd. of Public Affairs, Oklahoma City, let contract at \$36,600 to Bailey-Burns Construction Co., Norman, for addition to Hope Hall, Central State Hospital; Layton, Hicks & Forsyth, Archts., Braniff Bldg., Oklahoma City. 9-3

Okla., Tulsa—City let contract at \$55,800, including equipment, to DeWitt & Howard for negro hospital, Greenwood Ave. and Pine St.; C. A. Popkin, Archt., Commercial Bldg. 8-27

Miscellaneous

Fla., Hialeah—Sandquist Construction Co., S. W. 27th Ave., has contract at \$3750 for unloading platform at racing track for Miami Jockey Club; mule barns, Deigaard Builders, Inc., 2975 S. W. Eighth St., at \$4244, both Miami; St. John Co., Inc., 629 N. W. Seventh St., P. O. Box 436, Miami, contractors for stables, let following sub and material contracts: Lumber, Drake Lumber Co., 1800 N. Miami Ave.; roofing, Miami Roofing & Sheet Metal Works, 127 N. W. Fifth St.; painting, Cowart & Arriett, 1229 N. E. Second Ave.; elec. work, James Jones, 464 E. 21st St.; conc. work, Everglades Construction Corp., 2705 N. W. 62nd St., all Miami; Smith & Riddle, Inc., Supvg. Engrs., 210 Royal Palm Way; L. W. Geisler, Archt., 19 Via Parigi, both Palm Beach. 9-3

Md., Baltimore—American Steel Engineering Co., has contract for 200 tons struc. steel for Loney's Lane bridge for City; Mullan Contracting Co., Gen. Contr., 3945 Greenmount Ave. 8-13

Mo., Joplin—Joplin Mortuary Co., N. E. Lanpher, Pres., 15th & Miss. Sts., organized; erect Spanish type bldg., 15th and Joplin Sts.; C. H. Sudhoelter, Archt., 715 Joplin St. 8-27

Tenn., McMinnville—Wm. H. Magness, Jr., care Geo. D. Waller, Archt., 911 Indiana Life Bldg., Nashville, let contract at about \$40,000 to Chrichlow & Yearwood for W. H. and Edgar Magness Community House and Library; stone, 2 stories and basement. 5-28

Va., Richmond—Cavalier Athletic Club, Carter N. Williams, Jr., Chmn., Bldg. Comm., 3500 Seminary Ave., has completed plans for \$750,000 club, Sixth St. near Franklin St.; financing arranged; steel frame, rein. conc., 7 stories, 50 rooms; Frederic A. Fletcher, 517 N. Charles St., Baltimore, Md., and Marcellus E. Wright, Amer. Natl. Bank Bldg., Richmond, Archts.; tentative contract let jointly to Allan J. Saville, Inc., Elect. Bldg., and Wise Granite & Construction Co., Amer. Natl. Bank Bldg., both Richmond. 4-30

Railways Stations, Sheds, Etc.

Ga., Atlanta—Railway Express Agency, G. J. Dye, Southern Constr. Supvr., 325 Mitchell St., S. W., repair bldg.; day labor.

Schools

Ala., Scottsboro—Jackson County Bd. of Education let contract to Walker Bros. & Co., Jackson Bldg., Birmingham, for \$25,000 addition to high school; brick; 2 stories; plans by State Dept. of Education, Montgomery; also erect \$5000 addition to grammar school. 7-9

D. C., Washington—M. Cain Co., Inc., 3315 Eighth St., N. E., has contract at \$21,000 to improve grounds at Charles W. Elliot School. 8-27

D. C., Washington—Henry A. Hitner's Sons Co., Inc., Gaul and Huntington Sts., Philadelphia, Pa., reported, has contract for 114 tons struc. steel for 2 schools; Deitrich Bros., 220 Pleasant St., Baltimore, Md., has contract for 135 tons struc. steel for \$200,000 McFarland Junior High School. 8-20 and 9-3

D. C., Washington—Dist. Commrs., Dist. Bldg., let contract to A. Lloyd Goode, Inc., 11 E. Fifth St., Charlotte, N. C., for addition and improvements to Paul Junior High School; \$147,500, fireproof, 120x70 ft., wood, terrazzo and tile floors, built-up roof; A. L. Harris, Municipal Archt., Dist. Bldg. 8-27

La., Bordelonville—Avoyelles Parish School Bd., Marksville, let contract at \$26,927 to E. E. Rabalais & Son, Bunkie, for conc., stucco and frame school; 1 story, wood floors, asbestos shingle roof; W. T. Nolan, Archt.-Engr., Canal Bank Bldg., New Orleans. 8-20

La., Dupont—Avoyelles Parish School Bd., Marksville, let contract at \$10,350 to E. E. Rabalais & Son, Bunkie, for school; W. T. Nolan, Archt., Canal Bank Bldg., New Orleans. 8-20

La., Simmesport—Avoyelles Parish School Bd., Marksville, let contract at \$14,336 to E. E. Rabalais & Son, Bunkie, for school; rein. conc. foundation, frame and weather-board, asbestos slate shingle roof; W. T. Nolan, Archt.-Engr., Canal Bank Bldg., New Orleans. 8-13

Okla., Stillwater—Bd. of Education, Dist. No. 16, let contract to L. J. Jardt for brick school; plans by P. A. Wilbur, care Archt. Dept. of A. & M. College, both Stillwater. 8-27

S. C., Orangeburg—Bd. of School Trustees, W. A. Livingston, Chmn., let contract at \$24,600 to W. H. Sellers, for brick and steel gymnasium; J. B. Urquhart, Archt., 606 Cent. Union Bldg., both Columbia. 8-27

Tex., Big Spring—Markham-Jones Lumber Co. has contract for brick and tile school; use salvaged brick.

Tex., San Marcos—Southwest Texas State Teachers College let contract at \$29,840 to Vincent Falbo, 515 N. San Saba St., San Antonio, for gymnasium; struc. clay tile and frame, 2 stories, 106x102 ft., conc., struc. steel, cement and wood floors, metal lath, slate roof; W. E. Ketchum, Archt., Pope Bldg., Austin. 8-13

Va., Whitwell—Pittsylvania County, F. B. Watson, Div. Supt., Chatham, let contract to J. H. Bennett, Richmond, Va., for school; to J. W. Stout, Sanford, N. C., for high school, Dan River; to H. M. DeMott, Staunton, Va., for school, Dixie. 8-13

Stores

Va., Warsaw—Mrs. S. R. Hopkins erect store; H. Carl Messerschmidt, Archt., Mutual Bldg., Richmond; H. T. Dodson, Contr., Warsaw. 8-27

Theatres

Ala., Huntsville—Crescent Amusement Co. let contract to Sumner Construction Co., Sumner Bldg., Nashville, Tenn., to rebuild burned Lyric Theater; \$24,000; equipment, etc., about \$50,000; Joe Holman, Company Archt. 9-3

Warehouses

Ky., Murray—Outland Bros. Tobacco Co. let contract to Key Bros. Construction Co. for tobacco warehouse; brick, steel and conc., 2 stories and basement, 90x210 ft.

N. C., Raleigh—Raleigh Bonded Warehouse Co., Wake Forest Road, let contract to J. A. Davidson, 126½ S. Salisbury St., for \$30,000 warehouse.

Tenn., Johnson City—Cinchfield Railroad, L. H. Phetteplace, Gen. Mgr., erect tobacco prizing warehouse; \$25,000, 96x310 ft., fireproof, steel frame, galv. iron, 30,000 sq. ft.; financing by Holston Land Co., subsidiary; Johnson City Foundry & Machine Co., Contr.

The Chesapeake & Ohio Railway Co., C. W. Johns, chief engineer, Richmond, Va., authorized construction of an overhead crossing on Mommouth street, Newport, Ky., to cost \$710,700.

Trade Literature

What Price Cellophane?—A forthcoming issue of the Du Pont Magazine, publication of E. I. du Pont de Nemours & Company, Wilmington, Del., will carry an article on cellophane under the foregoing caption, stressing the fact that the price of this material has been reduced 13 times since the Du Pont Company put it on the market, or from \$2.65 to 45 cents per pound. In view of the fact that the Du Pont Company alone produces cellophane in this country, the continued price reduction of the commodity is pointed to by the author of the article as an interesting and significant business policy established by the Du Pont Cellophane Company.

"Roadlayer" Tracks.—LaPlant-Choate "Roadlayer" tracks are illustrated and described in a pamphlet issued by the LaPlant-Choate Manufacturing Company, Inc., Cedar Rapids, Iowa. The broad face of the track shoe, large load wheels and anti-clogging design make it possible for the track to pull easily over the roughest ground, it is said, while every piece of the unit is heat-treated to resist wear and withstand great stress. The track is designed to travel easily in sand, mud, rock or gravel and is adapted to such hauling equipment as cane carts, dump wagons, oil field and logging trailers, etc.

South Bend Lathes.—General catalog No. 92, devoted to the South Bend Series "O" line of lathes, from the 9-inch size to the 18-inch size, has been issued by the South Bend Lathe Works, South Bend, Ind. Several new model lathes have been added to this edition of the catalog, the silver jubilee number. Of special interest is the Underneath Belt Motor Driven Lathe, in tool room and general purpose types. Several attachments are listed for handling special work.

Emergency Lighting Protection.—The Electric Storage Battery Company, Philadelphia, Pa., manufacturers of Exide batteries, have issued a bulletin on Emergency Lighting Battery Systems for furnishing power instantaneously and automatically in the event of power failure. The bulletin outlines important reasons for emergency lighting protection in public or semi-public buildings and in industrial plants, and cites ten reasons for installing Exide emergency protection.

Expansion Joints.—The Croll-Reynolds Engineering Co., Inc., New York, has issued Bulletin No. 40 devoted to FlexoDisc Expansion Joints developed by the company in an effort to produce an expansion joint "which would solve all pipe expansion problems." Included as standard are: High pressure flanged types, low pressure flanged type, welding types and duplex types.

Chain Grate Stokers.—The Babcock & Wilcox Company, New York, has issued a new bulletin covering Chain Grate Stokers, which the company says are built with the precision of fine machine tools. The bulletin is attractively bound and presents comprehensive descriptions of various types, with illustrations and line drawings of each.

(Continued on page 52)

LEADITE

Labor Costs are Reduced—



Making up Leadite joints on 48-in. c. i. water main laid by New Bedford Water Works

48-in. c. i. water main, laid by New Bedford Water Works with Leadite joints. Note the flexibility of Leadite and c. i. pipe in making curve without the use of special castings.

Pouring Leadite joints on 48 in. c. i. water mains laid by New Bedford Water Works. Note high pouring gate used to insure top of joint being completely filled.

when LEADITE is Used

BECAUSE LEADITE REQUIRES "NO CAULKING,"—it SAVES THIS labor item, also the extra time required for digging "large" bell holes,—and it reduces the charges for trench pumping in wet trenches.

Further, LEADITE saves time because it melts at a low temperature, and is light in weight and easy to handle and apply—this saves considerable in freight, hauling and handling charges on the job. (For instance, it takes approximately 6 lbs. of Leadite to make a 12 in. joint 2½ in. deep.)

When all of these "saving factors" are

taken into consideration, it can be readily understood why we say:

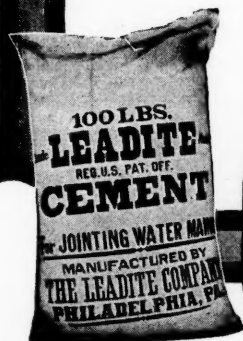
"Labor Costs Are Reduced—When Leadite Is Used"

Thousands of miles of bell and spigot Water Mains of various sizes and under various pressures, throughout the country are satisfactorily jointed with LEADITE, — which, we believe, is conclusive proof that LEADITE has no superior as a "jointing material" for bell and spigot pipe.

It has been said that "a man is judged by the company he keeps,"—the number and type of LEADITE users is an excellent basis upon which to judge its "standing."

*The pioneer self-caulking material for c. i. pipe.
Tested and used for over 30 years.
Saves at least 75%.*

THE LEADITE COMPANY
Land Title Building - - Philadelphia, Pa.



No Caulking'



WANT SECTION

THE CLASSIFICATIONS IN THIS SECTION ARE:

Machinery and Supplies

Under this heading are reported requests for data, prices and literature and information on machinery, supplies and miscellaneous materials of a wide variety.

Items in this department are published without charge and these columns are open for the publication of wants of all kinds relating to construction work, machinery, materials and supplies.

Building Materials and Equipment

This division comprises all classes and kinds of materials and equipment used in building and construction projects of every kind.

Bids Asked

Includes bids asked by U. S. Government, States, districts, municipalities, firms and individuals for machinery, materials, supplies and construction work.

Machinery and Supplies

Ice Machinery.—Jno. L. Jackson, Pres., Jackson's Home Ice & Creamery Co., Spindale, N. C.—Wants complete ice making machinery and equipment.

Peanut Cleaning and Shelling Machinery.—S. T. Hyman, 628 Dumbarton Ave., Baltimore, Md.—Wants prices and data from manufacturers of peanut cleaning and shelling machinery.

Revolving Crane.—Lewter F. Hobbs, Inc. (Mchy. Dealer), McKevitt Bldg., Norfolk, Va.—Wants prices and data on ½-yd., full revolving gasoline crane or shovel, with trench hoe, used, first-class condition.

Sawmill Carriage, etc.—W. M. Smith & Co. (Mchy. Dealer), Box 1907, Birmingham, Ala.—Wants prices and data on used Wheland sawmill carriage to be used with 10-in. shot gun feed; also set works.

Transformers.—Medley Mfg. Co., Columbus, Ga.—Wants prices and data on 2 used or rebuilt, 10-kw. transformers, 2300 volts, 220-110 volts; to have Scott taps that they may be used to transform 2300 volts 3 phase to 220 volts 2 phase, and 110 volts single phase.

Machinery Record. Hackley Morrison (Mchy. Dealer), Mutual Bldg., Richmond, Va.—Wants prices and data on following:

- (1) **Boilers**—150 h. p., Scotch, 125 lb. pressure; 300 to 600 h. p. water tube, 400 lb. working pressure, 600 h. p. preferred
- (2) **Derrick**—electric driven, AS, 220 volt, 60 cycle, 3 phase, with approx. 90-ft. mast, 80-ft. boom, 5 ton capacity
- (3) **Ribbers**—several 3¼-120x120 with selvege welt for 240 needle machines or Wildman ribber 3¼-120x120 also with selvege welt and for 240 needle machines
- (4) **Shovel-Crane**—used, ½ yd., gas, full revolving model preferred, for Virginia delivery
- (5) **Tank (Glass Lined)**—8000 gal.
- (6) **Tank and Tower**—15,000 gal., on 40-ft. steel tower.

W. M. Smith & Co. (Mchy. Dealer), Box 1709, Birmingham, Ala.—Wants:

- (1) **Air Compressors**—belt driven, every size from 40 to 400 cu. ft. per min.
- (2) **Locomotive Tires**—eight 44-in. inside diam.

Machinery Record. Hackley Morrison (Mchy. Dealer), Mutual Bldg., Richmond, Va.—Wants prices and data on following:

- (1) **Grinder, etc.**—used, No. 1, Williams Little Giant, fitted with ½-in. screen, for crushing oyster shell
- (2) **Paint Mixer**—30 to 40 gal. capacity.

Miscellaneous

Celluloid.—William J. Stolz, Morris Heights Sta., New York, N. Y.—Wants prices and data on 200 sheets celluloid, 20x50 in., 0.015 in. thick.

Electric Ranges and Refrigerators.—L. C. Fuller, Pinehurst, N. C.—Wants prices and data on used electric ranges and electric refrigerators.

Valves.—H. L. Campbell, 5098 Central Ave., Tampa, Fla.—Wants prices and data from manufacturers of special valve, for fire use.

Tank and Tower.—Lafayette Compress & Warehouse Co., Inc., Lafayette, La.—Wants prices and data on used, steel water tank and tower, 100,000 gal. capacity, 125 ft. high or not less than 100 ft. high, erected on grounds, Lafayette.

Building Material and Equipment

L. C. Fuller, Pinehurst, N. C., wants prices on following:

- Electric Ranges—used
- Electric Refrigerators—used
- Lewter F. Hobbs, Inc., P. O. Box 1293, Norfolk, Va., wants prices on:
- Steel Building—50x100 ft., 1 story.

Fred B. Fuqua & Co., Krise Bldg., Lynchburg, Va., estimating on \$120,000 auditorium-armory for City of Danville, Va.; bids Sept. 22 by City Council.

Bids Asked

Alternators.—Div. of Pur. and Sales, Dept. of Commerce, Washington, D. C.—Bids Sept. 15 for 50 3-kv-a. engine alternators with starting battery, etc.

Boiler Tubes, Ferrules and Plug.—Headquarters Third Area, Office of Corps Area Engr., 311 St. Paul Pl., Baltimore, Md.—Bids Sept. 14 for 161 boiler tubes, 322 ferrules to fit above tubes and fusible plug, f. o. b. 137th St. Sta., Fort Story, Cape Henry, Va.

Bridge.—North Carolina. See Construction News—Roads, Streets and Paving.

Bridge.—Houston, Tex. See Construction News—Bridges, Culverts and Viaducts.

Bridges.—State of Maryland—Bids for 3 bridges. See Construction News—Bridges, Culverts and Viaducts.

Bridges.—State of Virginia, 4 bridges. See Construction News—Roads, Streets and Paving.

Core Drilling.—See Construction News—Miscellaneous Construction.

Dredge pontoons and Pipe Line.—U. S. Engr. Office, 1006 McCall Bldg., Memphis, Tenn.—Bids Sept. 22 for constructing and delivering 8 steel dredge pontoons, 8 sections of 36 in. inside diam. steel dredge pipe and 1 home joint section of steel dredge pipe.

Dredge Tender (Diesel).—U. S. Engr. Office, Vicksburg, Miss.—Bids Oct. 2 for Diesel dredge tender to be used in connection with dredge "Todd", 51 ft. long, 14 ft. wide.

Dredging.—U. S. Engr. Office, Vicksburg, Miss.—Bids Sept. 15 for 3¼ cu. yd. clam shell dredging buckets.

Dredging.—North Carolina.—See Construction News—Drainage, Dredging and Irrigation.

Elevator.—Treasury Dept., Office of Supvg. Archt., Washington, D. C.—Bids Sept. 21 for installing complete elevator plant in post office, courthouse, etc., Wichita Falls, Tex.

Engine Generator Sets.—Supt. of Light-houses, Charleston, S. C.—Bids Sept. 15 for 3 5-kw. Diesel engine-driven electric generating sets.

Fire Alarm Boxes.—Dist. Commrs., Dist. Bldg., Washington, D. C.—Bids Sept. 30 for fire alarm boxes.

Gasoline and Oil.—Dept. of Agriculture, Dir. of Pur. and Sales, Washington, D. C.—Bids Sept. 15 for 32,000 gal. gasoline and 3200 qt. motor oil for Texas, during period Sept. 16 to June 30, 1932.

Heating Plant.—State Highway Comsn., Ben Johnson, Chmn., Frankfort, Ky.—Bids Sept. 15 for heating plant complete for garage and office bldg., Invitation No. E-971A.

Heating System.—U. S. Engr. Office, Huntington, W. Va.—Bids Sept. 16 for heating system, Lock 18, Ohio River.

Lacquer, etc.—Chemical Warfare Service, Edgewood Arsenal, Md.—Bids Sept. 15 for 633 gal. lacquer, 50 gal. solvent and 90 lb. lamp black.

Landscape Planting.—Veterans Administration, Construction Service, 764 Arlington Bldg., Washington, D. C.—Bids Sept. 22 for landscape planting, including bed preparation, tree pits, plants, etc., U. S. veterans hospital, Excelsior Springs, Mo.

Lathe.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids Sept. 29 for motor driven tool room precision lathe.

Levee.—New Orleans, La. See Construction News—Miscellaneous Construction.

Lift Trucks.—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Sept. 16 for 4 lift trucks, delivery Quantico, Va.

Miscellaneous.—Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids Sept. 17 for following, Sch. 2682:

Cable, screws, staples, cotters, screw eyes, cup hooks, hinges, door knobs, sash lifts, awning pulleys, carbide lamps, sprinkling cans, hand sprayers, hedge shears, rakes, hoes, chair seats, sash-tool brushes, molding

sand, sea-coal facing, blacksmith coal, twine and lumber crayons.

Nozzles.—Chemical Warfare Service, Edgewood Arsenal, Md.—Bids Sept. 16 for 17,660 elbow nozzles.

Power Plant Equipment.—Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids Oct. 14 for hydraulic and electrical apparatus for Madden power plant.

Rail and Tie Plates.—Office of Ch. of Engrs., Munitions Bldg., Washington, D. C.—Bids Sept. 17 for 50 tons 70-lb. rail and 5000 tie plates.

Refrigerating Equipment.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids Sept. 29 for refrigerating equipment.

Revetment.—See Construction News—Miscellaneous Construction.

Revetment.—See Construction News—Miscellaneous Construction.

Roads.—State Highway Dept., Dover, Del.—Bids Sept. 22 for Cont. 203, Philadelphia Pike—Widening at Claymont 0.84 mi.; 2500 cu. yd. excavation, 500 cu. yd. borrow, 40 cu. yd. rock excavation, 150 tons broken stone base course, 1500 cu. yd. conc. pavement, 900 lin. ft. expansion joint, 7000 sq. ft. conc. sidewalk, 40 cu. yd. Class "A" conc., 500 lb. reinforcement, 9000 lb. castings, 1800 lin. ft. 18-in., 1400 lin. ft. 24-in., 2000 lin. ft. 30-in., 200 lin. ft. 6-in. t. c. pipe, 500 lin. ft. 4-in. underdrain, 1200 lin. ft. conc. curb.

Roads.—State of Virginia, 2 roads. See Construction News—Roads, Streets and Paving.

Roads.—State of North Carolina—6 roads. See Construction News—Roads, Streets and Paving.

Roads.—Clayton, St. Louis, Mo. See Construction News—Roads, Streets and Paving.

Roads.—State of Georgia, 3 roads. See Construction News—Roads, Streets and Paving.

Roads.—State of Tennessee, 2 roads. See Construction News—Roads, Streets and Paving.

Roadway.—Fort Sill, Lawton, Okla. See Construction News—Roads, Streets and Paving.

Sign Posts (Street).—City, Office of City Secretary, 225 City Hall, Houston, Tex.—Bids Sept. 16 for furnishing and erecting 1250 street sign posts; W. E. Monteith, Mayor.

Steam Line, etc.—Bd. of Awards, Office of City Register, City Hall, Baltimore, Md.—Bids Sept. 16 for constructing steam line, etc., at Baltimore City Hospitals; Lear Small, Acting Engr., Bureau of Mechanical-Electrical Service, Dept. of Public Works.

Steel Roofing, Building Materials, etc.—U. S. Engr. Office, Vicksburg, Miss.—Bids Sept. 15 for 66.8 squares galv. steel roofing, nails, 2000 ft. pine lumber, 1912, 898, 1344 sq. 350 lin. ft. galv. ridge roll, 200 lb. roofing ft., wall board and 60 lb. joint filler.

Streets.—Clayton, St. Louis, Mo. See Construction News—Roads, Streets and Paving.

Streets.—Clayton, St. Louis, Mo. See Construction News—Roads, Streets and Paving.

Streets.—Washington, D. C. See Construction News—Roads, Streets and Paving.

Trucks.—Dist. Commrs., Dist. Bldg., Washington, D. C.—Bids Sept. 21 for 7 trucks, 1½ ton.

Vessel Repairs.—U. S. Engr. Office, Savannah, Ga.—Bids Sept. 16 for repairing U. S. hopper dredge Kingman.

Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids Sept. 23 for following, Sch. 2684:

Gasoline engine, car wheels, journal boxes, conductor rail, steel, steel billets, pig iron, ingot copper, pig lead, sewer pipe, wrought iron or steel pipe, lead pipe, boiler tubes, screws, files, paint drums and cans, water coolers, knapsacks, etc.

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Dept. of Agriculture, Dir. of Pur. and Sales, Washington, D. C.—Bids Sept. 21 for:

Truck Engine Parts
Cable—916,000 ft.
Shaft Assemblies—100
Fuel Pump Drive Assemblies—100
Pump Drive Coupling Assemblies—100
Streamline Tie-rods—550.

Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids Sept. 15 for:

Milling Machine—motor driven, for Portsmouth

Rubber Packing and Gaskets—for east and west yards

Brushes, Paint, Varnish, etc.—for east and west yards

Skid Platforms—6, entry type, for Hampton Roads

Motor Trucks—for eastern and western yards

Storage Battery—132 cells, for Norfolk

Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids Sept. 15 for:

Electric Fans
Cap Sump Assemblies
Kerosene.

Hercules Engines in Army Trucks

U. S. Army engineers have specified Hercules 6-cylinder engines for equipping 75 new 4-wheel drive trucks being manufactured for the Army at Camp Holabird, near Baltimore, Md. Three specified models will be used in about equal numbers to power trucks of three varying capacities: Models YXC3, 4½-inch by 4¾-inch; RXC, 4½-inch inch by 5¼-inch, and HXC, 5¼-inch by 6-inch. The Government recently purchased for Army use 33 Marmon-Herrington trucks of the 4-wheel drive type powered with Hercules 6-cylinder engines of the WX series. Hercules engines are made by the Hercules Motors Corporation, Canton, Ohio.

(Continued from page 48)

Heavy Duty Mill Motors.—The Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., has issued a leaflet illustrating and describing Type MC mill motors for heavy duty operations such as steel mill auxiliary drives, cranes, hoists, shovels, coal and ore bridges, mine hoists, railway turn tables, transfer tables, railway lift bridges, conveyors, etc.

American Foreign Trade.—The National Foreign Trade Council, New York, O. K. Davis, secretary, has issued an official report of the Eighteenth National Foreign Trade Convention held at New York on May 27, 28 and 29, 1931. The report is published in book form under the caption "Foreign Trade in 1931," and is a verbatim report of the proceedings, discussions, addresses and other features of the convention, with a list of delegates present, organizations and companies represented, personnel of the convention and its "final declaration in respect to foreign trade."

Gears and Machinery.—The Earle Gear & Machine Company, Philadelphia, Pa., has issued Catalogue 31, devoted to Earle gears and machinery, including metallic and non-metallic racks, sprockets, sheaves and speed reducers, together with bridge operating machinery and similar equipment. In addition to illustrations and descriptive data, the catalogue presents tables, specifications, formulae, etc.

Corporate Practices.—Embracing a total of more than 1500 pages, a volume "Formal Corporate Practice: Working Methods and Systems" has been issued by Burrell-Snow, Inc., New York. The book is by William H. Crow, A.B., LL.B., author of "Corporation Secretary's Guide" and "Corporation Treasurer's and Controller's Guide," and is designed as a guide to those concerned with or participating in the formal activities of a corporation. It is divided into eight parts, each covering special details relating to the organization and operation of the corporation. The price of the volume is \$10.

Southern Foreign Trade Conference

Representatives of 23 nations are to convene in New Orleans, September 28-29, to discuss world trade. Because of the low state of international business this Southern Foreign Trade Conference promises to be a significant gathering, according to George S. Hensley, chairman. It is further suggested that the fact that the fourth Pan American Commercial Conference is to be held in Washington, immediately following the New Orleans meeting, makes it possible for many of the Latin American leaders to come by way of New Orleans.

Concrete Reinforcing Steel Meeting

The semi-annual meeting of the Concrete Reinforcing Steel Institute is to be held at Buckwood Inn, Shawnee-on-Delaware, Pa., September 28-30. The morning sessions are to be devoted to the affairs of the concrete reinforcing steel industry and regional conferences will feature the afternoon sessions.

Special addresses will be delivered by O. W. Irwin, president of the Institute, and by Dr. Stephen I. Miller, whose subject will be "Let Us Look Ahead." Strickland Gillilan, noted humorist, will be the principal speaker at the banquet. M. A. Beeman is secretary of the Institute with headquarters in the Tribune Tower, Chicago, Ill.

\$5,000,000 for School Buildings

Kansas City, Mo.—Carrying out a \$5,000,000 school building program in Kansas City over a period of five years, for which a bond issue was voted in 1929, the school board has expended \$1,343,619 of the bond funds, while the total of contracts awarded is \$1,657,164. At its next meeting it will probably authorize the issuance of \$500,000 more of the bonds to complete this year's program, leaving \$3,000,000 to be issued in the next three years.

INDUSTRIAL NEWS

Mundet Changes Houston Office

L. Mundet & Son, Inc., Houston, Tex., announce the removal of their office from 2420 Nance street to their new building at Commerce and Palmer streets. The new location gives the company more space for carrying cork insulation of all kinds and sizes in stock, with ample office space and better service facilities. In addition to a complete stock of Mundet cork products, the company has a full high temperature line of asbestos products manufactured by the Keasbey & Mattison Company, Ambler, Pa.

Sale of Lumber and Millwork Plant

R. H. Starr, Greensboro, N. C., trustee in bankruptcy of the Guilford Lumber Manufacturing Co., bankrupt, Greensboro, will offer at public auction on October 10, on the premises, the lumber and millwork plant of the company and two tracts of land, with side track facilities. The sale will also include millworking machinery, dry kiln, boiler and engine, millwork, lumber, office furniture, supplies and equipment. Information may be obtained from Mr. Starr.

New Koppel Sales Manager

H. E. Chilcoat, formerly sales manager of the Air Dump Car Department of the Koppel Industrial Car and Equipment Company, Koppel, Pa., has been appointed general sales manager of the company. Mr. Chilcoat has had long experience in selling material-handling equipment to the railroad, contractor, industrial and quarry trades.

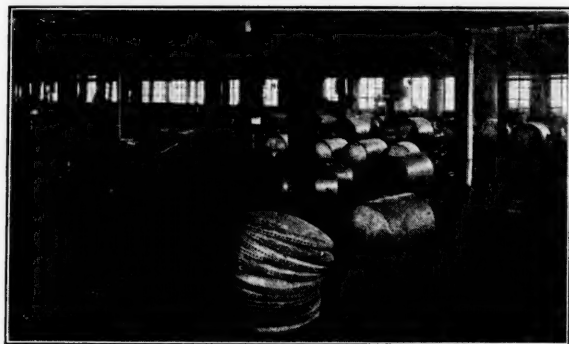
Changes Name of Truck Line

In order to identify their products more easily by the firm name, the Hamilton Caster & Manufacturing Company, Hamilton, Ohio, builders of industrial and warehouse trucks and casters, have announced a change of name in their truck line, which heretofore has been known as Zering. In future all products of the company will be identified by the name Hamilton, the change applying particularly to trucks. The complete Hamilton line includes more than 1000 trucks and casters for every type of work.

Machinery and Equipment Sale

By order of the stockholders of the Jenkins Vulcan Spring Company, Richmond, Ind., manufacturers of automotive replacement springs, the entire machinery and equipment inventory, etc., of the company will be sold at public auction September 15 at 10 A. M., central standard time. The sale will be under the management of the Industrial Plants Corporation (of Ohio), Columbian Building, Columbus, Ohio.

Convertible Shovel.—A new bulletin, FBE-211, has been issued by the Bucyrus-Erie Company, South Milwaukee, Wis., on its 21-B shovel-dragline-clamshell-lifting crane, recently announced. The bulletin is liberally illustrated with operating and machinery views and contains specifications and working range diagrams. The new machine is a ¾-yard unit (rope or chain crowd) and is gasoline, Diesel or electrically driven.



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BETHLEHEM

FINANCIAL NEWS

Bond Issues Proposed

Ala., Mobile—City Comsn. sell \$75,000 airport bonds, Sept. 15.

Ark., Little Rock—State Highway Note Bd., Dwight H. Blackwood, Chmn., opens bids Sept. 25 for \$2,000,000 20-yr. serial bonds to meet payment on contracts for work under way and other obligations of Highway Comsn.

Ark., Little Rock—State Note Bd. consider plans for offering \$1,300,000 bonds after Nov. 15.

Ky., Madisonville—Hopkins County, J. D. Shain, Judge, votes Nov. 3 on \$125,000 road and bridge bonds.

Ky., Owensboro—City votes in November on \$13,500 water bonds.

La., Lake Arthur—Town voted \$15,000 bonds for paving Main St. 8-6

La., New Orleans—Bd. of Levee Comms. of Orleans Levee Dist., Chas. J. Donner, Sec., received no bids for \$4,200,000 lake front improvement bonds; local clearing house banks will take blocks of the bonds from time to time at an agreed figure.

Md., Cumberland—Allegany County Comms., Thomas P. Richards, Clk., opens bids Sept. 29 for \$500,000, 4½%, \$1000 road bonds.

Miss., Jackson—State Bond Comsn., H. C. Yawn, Treas., reported, sell \$5,000,000 4½% bonds Sept. 15; proceeds to be used to retire state guaranteed certificates issued to depositors of banks which failed.

N. C., Lumberton—Local Government Comsn., Chas. M. Johnson, Dir., Raleigh, opens bids Sept. 15 for \$112,000, not to exceed 6% road bonds of Robeson County.

N. C., Winston-Salem—Local Government Comsn., Chas. M. Johnson, Dir., Raleigh, opens bids Sept. 15 for \$1,434,000 city bonds: \$900,000 funding; \$450,000 refunding and \$75,000 water.

Tex., Dallas—City, Earl Goforth, City Sec., has high bid for \$800,000, 4½% bonds from Ames, Emerich & Co., Chicago; Mercantile Commerce Co., St. Louis, Mo.; Stern Bros. & Co., Kansas City, Mo.; First National Se-

curities Corp., Dallas, and Alamo National Co., San Antonio, at 103.251. 8-27

Tex., El Paso—El Paso County Comms. Court plans election on \$850,000 bonds for flood control and \$275,000 for new city-county hospital.

Tex., Fort Worth—City Comsn. has high bid, at 101.03, from Eldredge & Co., New York, for \$1,792,000, 4½% bonds.

Tex., Orange—Orange County Reclamation & Conservation Dist., Judge DeWitt, C. Bennett, Supvr., probably hold election in January on \$565,000 bonds.

Tex., Robert Lee—Coke County votes Sept. 26 on \$175,000 paving bonds.

Bond Issues Sold

Ala., Gadsden—City Comsn. sold \$175,000, 5½% funding bonds to Ward, Sterne & Co., Birmingham, at 98.80. 8-20

Ark., Mena—City Comms. sold \$64,000 bonds to Mayor Fagan Bourland, Fort Smith, at 95.

N. C., Danbury—Local Government Comsn., Raleigh, sold \$100,000 Stokes County 6% funding bonds to Thompson, Ross & Co., Chicago: \$40,000, at par, and \$60,000 at \$100 premium. 8-27

N. C., Wayne—Local Government Comsn., Raleigh, sold \$10,000 City of Wayne 5½% notes to Wayne National Bank, at par.

N. C., Winston-Salem—Local Government Comsn., Raleigh, sold \$246,000 4¾% coupon bonds of Forsyth County tot Harris Forbes Co., New York and Wachovia Bank & Trust Co., Winston-Salem, jointly for \$199.48 premium. 8-27

New Financial Corporations

Ga., Savannah—Mutual Finance Co., Inc., capital \$20,000, chartered; Jerome T. Cohen, 210½ E. Gaston St.

Ky., Louisville—Church Securities Co., capital \$25,000, chartered; Stanley B. Young, J. Wilgus Naugher.

Md., Sykesville—Millard H. Weer, Mayor, and associates plan new bank.

Tenn., Chapel Hill—W. E. Stammer, Cashier, Bank of College Grove, College Grove, resigned position to organize new bank here; Hubert T. Scott to be president of new bank with Stammer, cashier.

First National Bank, J. L. Morgan, Pres., and Merchants & Farmers' Bank, both Marion, N. C., merged.

First National Bank, N. Jackson, Pres., and Guyan Valley Bank, J. Cary Alderson, Pres., both Logan, W. Va., merged.

Earnings Show Increase

Gross operating revenues of the Florida Power Corporation, St. Petersburg, subsidiary of the Seaboard Public Service Company, amounted to \$2,603,642 for 12 months ended June 30, 1931, as compared with \$2,485,070 for 12 months ended June 30, 1930. Net earnings, before depreciation, were \$1,297,307, as compared with \$1,211,780, and net income \$422,214, as compared with \$393,705. For the quarter ended June 30, 1931, gross operating revenues were \$653,888, compared with \$624,971; net earnings, before depreciation, \$317,578, compared with \$322,600, and net income, \$99,202, compared with \$96,375.

The Eastern Shore Public Service Company, Salisbury, Md., also a subsidiary of Seaboard had gross operating revenues of \$2,116,939 for 12 months ended June 30, 1931, as compared with \$1,814,722 for 12 months ended June 30, 1930; net earnings, before depreciation, \$884,467, as compared with \$721,563, and net income of \$476,168, as compared with \$399,363. Gross operating revenues for the quarter ended June 30, 1931, amounted to \$708,210, as compared with \$504,270; net earnings, before depreciation, \$274,634, as compared with \$182,768, and net income of \$152,923, as compared with \$101,736.

In the Interest of Western Carolina

Western Carolina Mountains, Inc., a regional association formed recently to serve the civic, commercial and industrial interests of the 18 counties comprising the "Land of the Sky," has been chartered under the laws of North Carolina, with headquarters at Asheville. S. G. Bernard, attorney representing the association, has received certificate of incorporation issued by the secretary of state and will present the charter at the next meeting of the board of directors.

Objects of the association are "to promote the civic, commercial and industrial development of the entire mountain region of Western North Carolina by all such lawful activities as may be authorized by the board of directors," including advertising by various media and methods, regional planning, resort and recreational development, industrial research and promotion, state, county and municipal research, and various

items classified as general development.

The charter provides that memberships may be accepted in five classes as follows: Communities and community organizations, corporations and business firms, affiliated organizations, individual residents of Western North Carolina, non-resident individuals who are directly interested in the welfare of Western North Carolina. The executive council will be composed of the officers, directors and one representative from every participating county or community not represented on the board of directors.

The officers of Western Carolina Mountains, Inc., are: President, Roger Miller of Asheville; vice-presidents, Dr. Jos. R. Sevier of Hendersonville and Bonner Ray of Waynesville; secretary-treasurer, Ralph E. Nollner of Lake Junaluska. Executive board includes the officers and the following directors: Reuben B. Robertson, Canton; Burnham S. Colburn, Biltmore Forest; Dr. L. B. Morse, Chimney Rock; Dr. R. C. Anderson, Montreat; E. L. McKee, Sylva.

Durham Building Activity

Durham, N. C.—Building activity here is reviving. Plans for three buildings alone call for an expenditure of approximately \$1,100,000. These three structures include a \$300,000 nurses' home to be erected on the Duke University campus in connection with a \$4,000,000 hospital recently completed; a \$250,000 medical arts building to be erected in the business center of the city to provide 130 offices, and a Federal building for which an appropriation of \$550,000 was made.

Plans for the nurses' home are being prepared by Horace Trumbauer, Philadelphia, Pa., and construction will be under the direction of A. C. Lee, chief engineer of the University.

The medical arts building will be erected by the Durham Medical Arts Corporation, Mrs. B. N. Duke, president, at a cost of approximately \$250,000. Milburn-Heister & Co., Washington, D. C., and Durham, are the architects.

BANKRUPT SALE OF LUMBER AND MILLWORK PLANT

On October 10th, 1931, at 12:00 o'clock noon, at Plant of Guilford Lumber Manufacturing Co., located at Greensboro, North Carolina, I will sell at Public Auction to the highest bidder for cash this modern plant.

(1) Said fireproof plant, equipped with Sprinkler System, and two tracts of land, with ample side track facilities, (2) complete millwork machinery, dry kiln, boiler and engine, millwork, lumber, office furniture, supplies and equipment. Located in the best city in North Carolina. Business established 1884.

Terms of Sale: 10% cash with high bid, balance to be paid in cash upon confirmation by the court.

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R. M. ROBINSON,
Attorney for Trustee

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— SERVICE —



BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS



PROPOSALS

Bids close September 16, 1931.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., August 18, 1931.—SEALED BIDS in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 2 p. m., September 16, 1931, for furnishing all labor and materials and performing all work for new toilet room, miscellaneous plumbing repairs, etc., at the U. S. post office, Helena, Ark. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications may be obtained from the custodian at the building or at this office, in the discretion of the supervising architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close September 18, 1931.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., August 21, 1931.—SEALED BIDS in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., September 18, 1931, for furnishing all labor and materials and performing all work for the construction (except elevators) of the U. S. post office, etc., at Altoona, Pa. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office, in the discretion of the supervising architect, by any satisfactory general contractor, and provided a deposit of \$25.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close September 18, 1931.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., August 28, 1931.—SEALED BIDS, in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., September 18, 1931, for furnishing all labor and materials and performing all work for the excavation and foundations for the U. S. post office department building at Washington, D. C. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office, in the discretion of the supervising architect, by any satisfactory general contractor, and provided a deposit of \$25.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close September 17, 1931.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., August 20, 1931.—SEALED BIDS, in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., September 17, 1931, for furnishing all labor and materials and performing all work for the construction of the U. S. post office at Harlan, Ky. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding 3 sets, may be obtained at this office, in the discretion of the supervising architect, by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

GENERAL INFORMATION

About Proposal Advertising in Manufacturers Record

PUBLICATION DAY: Thursday.
FORMS CLOSE: 10 A. M. Tuesday.

When too late to send copy by regular mail to reach us by 10 A. M. Tuesday, forward by night letter or air mail when possible.

THE DAILY CONSTRUCTION BULLETIN OF THE MANUFACTURERS RECORD

Published every business day, gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Construction Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened or when daily insertions are necessary to meet legal requirements.

The rate is the same for both publications—35 cents a line each insertion.

Bids close September 18, 1931.

U. S. Engineer Office, Mobile, Ala.—Sealed bids, in duplicate, subject to the conditions contained in the specifications, will be received until 11 o'clock A. M., September 18, 1931, and then publicly opened, for furnishing all labor and materials and performing all work of dredging approximately 3,400,000 cubic yards of material in the Gulfport Ship Channel and Anchorage Basin, Miss. Further information on application.

Bids close September 17, 1931.

Office of Executive Officer, Arlington Memorial Bridge Commission, Navy Building, Washington, D. C. Sealed bids will be received in this office until 11:00 A. M., Eastern Standard Time, September 17, 1931, and then publicly opened in Room 1613 Navy Building, for the paving, curbs, sidewalks, etc., on and around the Bridge Plaza at the east end of the Arlington Memorial Bridge. The major items of work involves the placing of about 20,700 square yards of cold bituminous concrete paving of which about 16,000 square yards has a 10-inch macadam base; about 3,630 linear feet of curbs; and about 8,340 square yards of scrubbed pebble finish sidewalks. The above quantities also include the paving on the Parkway Underpass and Parkway Approach for which no foundation is required, and also the laying of the sidewalks on the upstream side of the Arlington Memorial Bridge and on the Parkway Underpass and the Parkway Approach. Further information upon application.

Bids close October 21, 1931.

OFFICE OF THE ARCHITECT OF THE CAPITOL, Washington, D. C., September 3, 1931. SEALED BIDS will be opened in this office at 3 P. M., Eastern Standard Time, October 21, 1931, for the construction of the new United States Supreme Court Building, to be built on Squares 727 and 728, Washington, D. C. The building as designed, will occupy approximately 103,000 square feet, with approximately 30,000 square feet additional in terraces and driveways; central portion, five stories and basement; side portions, three stories and basement; fireproof construction with marble facing. Drawings and specifications, not exceeding three sets, may be obtained at the Office of the Architect of the Capitol, in the discretion of said Architect by any satisfactory general contractor. A deposit of one hundred (\$100) will be required for each set of drawings and specifications, to insure their return in good condition. The deposit must be a check made payable to the order of David Lynn, Architect of the Capitol. DAVID LYNN, Architect of the Capitol.

Bids close September 15, 1931.

U. S. Engineer Office, Jacksonville, Fla.—Sealed bids, in duplicate, will be received here until 12 noon, Sept. 15, 1931, and then opened, for furnishing all labor and materials and performing all work for constructing approximately 35,000 linear feet of levee and navigation channel, involving the removal from the navigation channel and placing in levee of approximately 2,179,000 cubic yards of material, dragline section, or 3,064,000 cubic yards, hydraulic section, including necessary drainage structures, between Diaston Island Drainage District Pumphouse No. 1, near Moore Haven, Fla., at Station 300, and extending towards Clewiston, Fla., as far as available funds will permit. Further information on application.

Bids close September 17, 1931.

OFFICE OF THE ARCHITECT OF THE CAPITOL, Washington, D. C., August 15, 1931. SEALED BIDS will be opened in this office at 3 P. M., Eastern Standard Time, September 17, 1931, for the construction of a house, walks, installation of an underground sprinkler system, street lighting system, etc., in Squares Nos. 576 and 578 in connection with the United States Botanic Garden, Washington, D. C. On or after August 22, 1931, plans and specifications, not exceeding three sets, may be obtained at the Office of the Architect of the Capitol, in the discretion of said Architect, by any satisfactory general contractor. A deposit in the form of a check for \$25.00, made payable to the order of David Lynn, Architect of the Capitol, will be required for each set of plans and specifications to insure their return in good condition. DAVID LYNN, Architect of the Capitol.

Bids close October 6, 1931.

SEALED BIDS, in triplicate, subject to the conditions contained herein, will be received by the Veterans Administration, Room 764, Arlington Building, Washington, D. C., until 2:30 P. M., October 6, 1931, and then publicly opened for furnishing all labor and materials and performing all work required for constructing and finishing complete at SOLDIERS' HOME, JOHNSTON CITY, TENNESSEE, HOSPITAL ADDITION, CONNECTING CORRIDOR AND BARRACK BUILDING, including roads, walks, grading and drainage. This work will include excavating, reinforced concrete construction, hollow tile, brick work, cut stone, architectural terra cotta, marble work, floor and wall tile, rubber tile, compressed asphalt tile and linoleum floors, terrazzo, iron work, steel stairs with slate treads, steel shelving, cabinets and partitions, slate, metal and built-up roofing, roof ventilators, metal lathing, plastering, sound deadening, carpentry, metal weatherstrips, insect screens, window shades, painting, glazing, hardware, plumbing, heating, electrical work, electric elevator, and outside sewer, water, gas, steam and electric service connections. SEPARATE BIDS will be received for (a) General Construction; (b) Electric Elevator; all as set forth on bid form. Bids will be considered only from individuals, firms or corporations possessing satisfactory financial and technical ability, equipment and organization to insure speedy completion of the contract and in making awards, the records of bidders for expedition and satisfactory performance on contracts of similar character and magnitude will be carefully considered. At the discretion of the Administrator, drawings and specifications may be obtained upon application to the Construction Service, Room 764, Arlington Building, Washington, D. C. While no deposit will be necessary, return of the drawings and specifications within ten days after date of opening bids will be required. In case no bid is to be submitted, the return of plans and specifications, as soon as this fact has been determined, and before the date for opening bids, is requested. Compliance with the requirement and with the request indicated will be considered in connection with future applications for drawings and specifications. GEORGE E. IJAMS, Assistant Administrator.

Bids close September 29, 1931.

\$500,000 4½% Road Bonds

ALLEGANY COUNTY, MARYLAND

Cumberland, Md.

The County Commissioners of Allegany County, Maryland, will be in readiness to receive sealed bids at the office of the County Commissioners of Allegany County in the Court House situated on Washington Street, in the City of Cumberland, Maryland, at 11:00 o'clock A. M., September 29th, 1931, for an issue of Allegany County Bonds known as "Allegany County Road Bonds, Issue of 1931," amounting to FIVE HUNDRED THOUSAND (\$500,000.00) DOLLARS, at which time and place said bids will be opened by the Clerk of the County Commissioners in the presence of the County Commissioners of Allegany County.

Bids may be made for all or part of the issue. All bids, together with certified checks for Five per centum of the amount bid as security for compliance with bid, must be filed with the Clerk of the County Commissioners at or before the time hereinbefore mentioned.

Bonds will be payable to "Bearer," non-registerable and are authorized by Chapter 105 of the Acts of the General Assembly of Maryland of 1931, and bear interest at the rate of four and one-half per centum (4½%) per annum and will be issued in the denomination of One Thousand (\$1,000.00) Dollars each, and in series according to their maturity, each series to be designated by a different letter, beginning with the letter "A," and a series (Series "A"), of said bonds to the amount of One Hundred Thousand Dollars shall mature and become payable One Year after the date of their issue, and a like series, (Series "B"), to the amount of One Hundred Thousand Dollars, Two Years from the date of their issue, and so on until the whole amount thereof shall have been redeemed so that the last series of this issue of said bonds shall fall due and become payable at the end of five years from the date of the issue thereof. The bonds will be dated July 1st, 1931, and accrued interest between the date thereof and the time of payment therefore shall be adjusted with the purchaser or purchasers.

Interest will be paid semi-annually on the first days of January and July, represented by interest coupons attached to said bonds. Bonds are exempt from City, County and State taxation in Maryland.

Financial statement of Allegany County:
Assessable basis \$92,076,623.05
Bonded indebtedness (not including this issue). No floating debt \$2,410,000.00
The County Commissioners reserve the right to reject any and all bids.

Address all bids to Thomas P. Richards, Clerk of the County Commissioners of Allegany County, Maryland, marked "Bids for Bonds." Further information may be received from said Clerk.

By order of the County Commissioners of Allegany County, Maryland.

A. CHARLES STEWART, President.
THOMAS P. RICHARDS, Clerk.

Bids close September 18, 1931.

\$60,000 4½% Bonds

MEMORIAL HOSPITAL, ALLEGANY COUNTY, MARYLAND

Cumberland, Md.

Sealed bids will be received by the Clerk of the County Commissioners of Allegany County, Maryland, at the office of the Clerk of the County Commissioners of Allegany County in the Court House, situated on Washington Street, in the City of Cumberland, Maryland, until 11:00 A. M., September 18, 1931, for an issue of Allegany County Bonds known as "MEMORIAL HOSPITAL BONDS OF 1931," amounting to SIXTY THOUSAND (\$60,000.00) DOLLARS, at which time and place said bids will be opened by the said Clerk in the presence of the County Commissioners of Allegany County.

Bids may be made for all or part of the issue. Certified check for Five per centum of the amount bid must be deposited with any bid for said bonds, as security for compliance with bid.

Bonds will be payable to "Bearer," non-registerable and are authorized by Chapter 227 of the Acts of the General Assembly of Maryland of 1931, and bear interest at the rate of four and one-half per centum (4½%) per annum and will be issued in the denomination of One Thousand (\$1000.00) Dollars each, and a series of said bonds

to the amount of Five Thousand Dollars shall mature and become payable One Year after the date of their issue, and a like series to the amount of Five Thousand Dollars Two Years from the date of their issue, and so on until the whole amount thereof shall have been redeemed so that the last series of said bonds shall fall due and become payable at the end of twelve years from the date of the issue thereof.

Interest will be paid semi-annually, represented by interest coupons attached to said bonds. Bonds are exempt from City, County and State taxation in Maryland.

Financial statement of Allegany County:
Assessable basis \$92,076,623.05
Bonded indebtedness (not including this issue). No floating debt 2,350,000.00

Address all bids to Thomas P. Richards, Clerk of the County Commissioners of Allegany County, Cumberland, Maryland, marked "Bids for Bonds." Further information may be received from said Clerk. The County Commissioners reserve the right to reject any or all bids.

By order of the County Commissioners of Allegany County, Maryland.

A. CHARLES STEWART, President.
THOMAS P. RICHARDS, Clerk.

Bids close September 15, 1931.

Railroad and Highway BridgeSTATE OF LOUISIANA
AND
CITY OF NEW ORLEANS

New Orleans, La., July 21, 1931.

Sealed proposals will be received by the State of Louisiana, acting through the State Advisory Board, represented by its Chairman, Huey P. Long, and the City of New Orleans, acting through the Public Belt Railroad Commission, represented by its President, T. Semmes Walmsley, at the Council Chamber in the City Hall, New Orleans, La., until two P. M. (Central Standard Time), TUESDAY, SEPTEMBER 15, 1931, for the construction of combined railroad and highway bridge across the Mississippi River above New Orleans. The approximate quantities of work to be performed under four contracts are given below:

Contract No. 3 — Substructure — Main Bridge.

Borings 3075 lin. ft.
Caisson Foundations 133,700 cu. yds.
Concrete Footings.
Pedestals and Shafts 45,000 cu. yds.
Granite Facing 2200 cu. yds.
Excavation other than Caisson 14,900 cu. yds.

Gravel Fill 1150 cu. yds.
Timber Piles 124,500 lin. ft.
Reinforcing Steel 1,000,000 lbs.
Mattress Protection 537,500 sq. ft.
Contract No. 4 — Superstructure — Main Bridge.

Structural Metalwork 39,400,000 lbs.
Heat Treated Eyebars 2,800,000 lbs.
Railway Deck Timbers Treated 550 MBM.
Concrete Roadway Slabs 3270 cu. yds.
Reinforcing Steel 225,000 lbs.
Roadway Steel Reinforcing Trusses 183,000 lin. ft.

Contract No. 5 — Substructure Approaches.
Excavation for Footings 32,400 cu. yds.
Concrete in Pedestals, Footings and Abutments 24,700 cu. yds.

Reinforcing Steel 1,130,000 lbs.
Timber Piles 60' long 1,032,200 lin. ft.
Highway Embankments 25,000 cu. yds.
Bituminous Roadway Surface 8000 sq. yds.
Reinforced Concrete Pipe, 12" diam., 750 lin. ft.

Reinforced Concrete Pipe, 24" diam., 750 lin. ft.
Steel Driving Shoes for piles 5000 shoes.
Contract No. 6 — Superstructure Approaches.
Structural Metalwork 78,000,000 lbs.
Railway Deck Timbers Treated 3500 MBM.
Concrete Roadway Slabs 4860 cu. yds.
Reinforcing Steel 336,000 lbs.
Roadway Steel Reinforcing Trusses 275,000 lin. ft.

Copies of the contract drawings, contract, specifications, proposals and bond may be secured from the Louisiana Highway Commission at Baton Rouge, La., or the Public Belt Railroad Commission, Municipal Building, New Orleans, La., or Modjeski, Masters and Chase, 121 East 35th Street, New York, N. Y. A deposit of fifty dollars (\$50.00) will be required to be made for each set of plans, forty dollars (\$40.00) of which will be refunded upon the return of the plans in good condition.

In addition to the surety's consent there

will be required to be deposited with each bid submitted certified check in the amount shown below:

Contract No. 3 — \$100,000.00
Contract No. 4 — \$100,000.00
Contract No. 5 — \$25,000.00
Contract No. 6 — \$100,000.00

The State and City reserve the right to reject any or all bids, or to accept any bids which will be for the best interests of the State and the City.

STATE OF LOUISIANA,
Acting Through

STATE ADVISORY BOARD

By HUEY P. LONG, Chairman.

CITY OF NEW ORLEANS

Acting Through

PUBLIC BELT RAILROAD COMMISSION

By T. SEMMES WALMSLEY, President.

Bids close September 22, 1931.

BridgeDEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND
STATE ROADS COMMISSION

NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for construction of bridge as follows:

Cecil County—Contract No. Ce-108-27—Concrete girder bridge (1136' between abutments on concrete pile substructure, including all bascule piers, operator's house, approaches, etc., exclusive of bascule span superstructure, over the Bohemia River on the road from Chesapeake City to Cecilton.

will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Sts., Baltimore, Maryland, until 12 M. on the 22nd day of September, 1931, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check, payable to the State Roads Commission of Maryland, as required by Sec. 6, Chapter 539, Act of 1931, of the amount as set forth in the proposal form.

The successful bidder will be required to give bond, and comply with the Acts of the General Assembly of Maryland, respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 2nd day of September, 1931.

G. CLINTON UHL, Chairman.
L. H. STEUART, Secretary.

Bids close September 24, 1931.

BridgeDEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND
STATE ROADS COMMISSION

NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for construction of bridge as follows:

Dorchester County—Contract No. D-79-17—Concrete girder bridge (463' between abutments) on concrete pile substructure, including all bascule piers, operator's house, approaches, etc., exclusive of bascule span superstructure, over Marshyhope Creek, on the road from Rhodesdale to Eldorado at Brockview.

will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Sts., Baltimore, Maryland, until 12 M. on the 24th day of September, 1931, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check, payable to the State Roads Commission of Maryland, as required by Sec. 6, Chapter 539, Act of 1931, of the amount as set forth in the proposal form.

The successful bidder will be required to give bond, and comply with the Acts of the General Assembly of Maryland, respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 2nd day of September, 1931.

G. CLINTON UHL, Chairman.
L. H. STEUART, Secretary.

Bids close September 15, 1931.

Bridge SuperstructureDEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND
STATE ROADS COMMISSION**NOTICE TO CONTRACTORS**

Baltimore, Md.

SEALED PROPOSALS for construction of bridge superstructure as follows:
Harford County—Contract No. H-126-44—Structural steel superstructure for bridge over Deer Creek on the Hickory to Ada Road.

will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Sts., Baltimore, Maryland, until 12 M. on the 15th day of September, 1931, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check, payable to the State Roads Commission of Maryland, as required by Sec. 6, Chapter 539, Acts of 1931, of the amount as set forth in the proposal form.

The successful bidder will be required to give bond, and comply with the Acts of the General Assembly of Maryland, respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 2nd day of September, 1931.

G. CLINTON UHL, Chairman.
L. H. STEUART, Secretary.

Bids close September 22, 1931.

Roads and Bridges

Richmond, Va.

Sealed bids will be received 10 A. M., Tuesday, Sept. 22, 1931, Va. Dept. of Highways, State Office Bldg., Richmond, Va., for the construction of:

Proj. 479 length 1.3 mi., type Gr. & Dr., excava. 40,056.

Proj. 640, 2 hrs. over Tinkers Cr., 1 over Carvins Cr., cu. yds. A conc., 103.4, B conc., 265.1 lbs. reinf. steel 13,635, struct. steel, 83,750.

Proj. 652, 3 mi. concrete, 54,328 excava., 30,281 sq. yds.

Proj. 658, Br. over David Cr., cu. yds. A conc., 268.3, lbs. reinf. steel 44,005.

Details obtainable upon request.

Bids close September 15, 1931.

Maryland Highway WorkDEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND
STATE ROADS COMMISSION**NOTICE TO CONTRACTORS**

Baltimore, Md.

SEALED PROPOSALS for building five sections of State Highway as follows:

Baltimore City—Contract No. BC-109-72—One section of State Highway along Mt. Royal Avenue from Lafayette Avenue to North Avenue, a distance of 0.22 mile (Sheet Asphalt)

Talbot County—Contract No. T-44-24—One section of State Highway along the Cordova-Easton Road from the end of Contract No. T-35 to the Wye Mills-Easton Road, a distance of 1.36 miles (Concrete)

Washington County—Contract No. W-100-62—One section of State Highway from Dry Run to the Pennsylvania State Line, a distance of 0.84 mile (Macadam)

Wicomico County—Contract No. WI-56-14—One section of State Highway along the Salisbury-Nanticoke Road, from the end of Contract No. WI-29 via Tyaskin, Bivalve to Nanticoke, a distance of 4.68 miles (Penetration Slag Macadam Resurfacing)

Worcester County—Contract No. Wo-103-14—One section of State Highway along the Snow Hill-Whitton Road from the end of Contract No. Wo-77 toward Whitton, a distance of 1.0 mile (Concrete)

will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Sts., Baltimore, Maryland, until 12 M. on the 15th day of September, 1931, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check, payable to the State Roads Commission of Maryland, as required by Sec. 6, Chapter 539, Act of 1931, of the amount as set forth in the proposal form.

The successful bidder will be required to give bond, and comply with the Acts of the General Assembly of Maryland, respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 1st day of September, 1931.

G. CLINTON UHL, Chairman.
L. H. STEUART, Secretary.

Bids close September 22, 1931.

Water Works System

Adairville, Ky.

Sealed bids for the construction of a water works system at Adairville, Kentucky, will be received by the Board of Trustees at the office of the City Clerk, Adairville, Kentucky, until 1:30 P. M., Tuesday, September 22, 1931, at which time and place they will be publicly opened and read.

The project comprises the following items:

CONTRACT NO. 1—Pumping Machinery. Furnishing four pumps with motors f. o. b. Adairville, Ky.

CONTRACT NO. 2—General. Construction of a filtration plant, pumping station and distribution system.

CONTRACT NO. 3—Furnishing f. o. b. Adairville, Kentucky, 15,000 lin. ft. Class 150 Centrifugal cast pipe, sizes 2" to 8".

CONTRACT NO. 4—Construction of an Elevated Steel Tank and Tower.

Plans and specifications may be examined at the office of the City Clerk, Adairville, Ky., or at the office of the Engineers, or a copy may be obtained from the Engineers upon receipt of a deposit of Ten (\$10.00) Dollars, one-half of which will be refunded when the plans and specifications are returned in good condition.

The right is reserved to reject any and all bids, and to waive all informalities.

Each bid must be accompanied by a certified check, drawn on a responsible bank or trust company, and made payable to the Town of Adairville, Kentucky, for a sum not less than 5% of the bid.

The successful bidder will be required to furnish a performance bond in the sum of 100% of the contract price.

Contractor will be paid monthly in bonds on the basis of 90% of the value of the work done and materials furnished during the preceding month.

If further information is desired, address the Engineers.

I. C. MASON,
Chairman Board of Trustees.
C. N. HARRUB ENGINEERING CO.,
705 American Nat. Bank Bldg.,
Nashville, Tenn.

CLASSIFIED OPPORTUNITIES**MINERAL AND TIMBER LANDS, WATER POWER, MISCELLANEOUS PROPERTIES**

FOR SALE—Gold-bearing tract of land in Alabama, 760 acres. Tested and proved.
J. H. ALLDREDGE, Agent,
Montgomery, Alabama.

KAOLIN

FOR SALE—Millions of tons of Pure White Kaolin. Vein 30 ft. thick three miles long.
J. C. HARRISON & CO., Clarksville, Ark.

FARM, FRUIT AND TRUCK LANDS

FREE HOMESTEADS, 640-320-160—some improved, forfeited; 18 states; deeded \$2.50 per acre; some irrigated: Maps, "700 Facts" 40c. No. 9133, Manufacturers Record.

SOUTHERN ESTATE

ESTATE FOR SALE—11 acres on St. Johns River opposite Jacksonville, also 12-room residence in good location, only few blocks from business center of Jacksonville.
A. G. Chappell, P. O. Box 392, Jacksonville, Fla.

Rates, Terms and Conditions

RATES: 30 cents a line each insertion. Minimum space accepted, four lines. In estimating the cost allow six or seven words of ordinary length to line. When the advertisement contains a number of long words proper allowance should be made.

Rates for Special Contract:

100 lines 28c a line
300 lines 26c a line
500 lines or more 25c a line

TERMS: For transient advertising cash with order; check, post office or express money order or stamps accepted.

On special contract advertising bills are rendered monthly, covering space used each month, payable within ten days.

CONDITIONS: No patent medicine, oil or mining stock advertisements or questionable or undesirable advertisements will be accepted. The assistance of our readers in excluding undesirable advertisements is requested. No display type used.

SOUTHERN ESTATE**IN SHENANDOAH VALLEY**

GENTLEMAN'S ESTATE, 635 acres, all level, smooth, highly productive, spring watered. Joins National Park with Scenic Highway, near U. S. Remount Station. Surrounded by fine homes; 200 acres old blue grass sod, 30 acres orchard in bearing, 50 acres virgin oak timber, 8 miles hog tight fence, Colonial brick residence, 9 rooms, 11 room residence with all modern imp. on highway, 3 tenant houses, large barns, running spring water in all buildings and fields. Price, \$45,000; improvements alone worth \$75,000.

W. T. BIRMINGHAM, Winchester, Va.

BUSINESS OPPORTUNITIES

LONG TERM LOANS, large amounts, made on industrial, mercantile, sawmill properties. THOS. W. GILMER, Attorney, Bay Minette, Alabama.

WANTED—A PARTY to finance the manufacturing and distribution of liquid Aspirin, best preventative for influenza. Address No. 9119, care of Manufacturers Record, Baltimore, Md.

BUSINESS OPPORTUNITIES

MOVING AHEAD

Parkersburg has worked out of the depression. Diversified industry did it. Locate your factory here at the gateway to the Central West and South.

BOARD OF COMMERCE,
Parkersburg, West Virginia.

INDUSTRIAL PLANTS

FOR SALE—Iron Works in Kansas, composed of Structural Steel Shop, Foundry, Machine and Sheet Iron Shop; established in 1902. Owners retiring. Annual business \$350,000 to \$400,000, net assets \$275,000. Will sell at sacrifice. Address No. 9126, care of Manufacturers Record, Baltimore, Md.

COTTON MILL
For Quick Sale
Exceedingly Cheap—Easy Terms
4 story, standard brick building.
28 tenant houses.
2 warehouses, one story brick.
8,512 spindles.
262 looms, 32", 36" and 40".
Powered with 360 H.P., new Diesel oil engine.
Good location as to labor, climate and operating conditions.
For further information, write No. 9127, care Manufacturers Record, Baltimore, Md.

FACTORY SITES

TWO AND ONE-QUARTER MILES railroad frontage industrial sites for sale at Baton Rouge. Southern Land and Investment Company, Baton Rouge, La.

FACTORY BUILDING

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Engine, 15x18 Erie City, 4 valve automatic steam, double eccentric, R.H. side crank, enclosed self oiling, 130-225 HP. A-1 condition, will sacrifice for \$300.00 fob cars Williamston, N. C.

Furnace, Booth electric, lined for brass melting, 725 lbs. capacity, 3300° F., special Sillimanite lining

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Loader, chain bucket Jeffrey truck loader for gravel, portable, self propelling, 18" buckets, Electric 5 HP. 3/60/220 v., sacrifice for cash \$250.00

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Motor-generator, 300 KW, 250 v. D.C. 2200 v. 3 ph. 60 cy. synchronous

Motor-generator, 150 KW, 125 v. 3/60/550 and panel

Motor-generator, 150 KW Ridgeway 275 v. D.C. 2200 v. A.C. synchronous motor (3) can be seen in service

Motor-generator, 25 KW, 125 volt D.C. with 35 HP. AC motor, 3/60/440 v.

Motor, 350 HP. slipring G.E. 720 RPM.

Motor, 300 HP. synchronous, G.E. 3 ph. 60 cy. 600 RPM.

Motor, 350 HP. Westinghouse type C.W. slipring, 3 ph. 25 cycle, 220 v., 490 RPM.

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Subject—Generator unit 50 K.V.A. Erie Ball.
Name—Town of Williamston, N. C.
Address—Mr. G. H. Harrison, clerk.
Location of item—Williamston, N. C.
Date of Listing—August 25th, 1931.
Lowest Cash Price—\$300.00 F.O.B. cars.

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Joplin Machy. & Elec. Co., Joplin
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Irving Barcan Co., 30 Church St., N. Y. City
Belyea Co., Inc., 145 W. 18th St., N. Y. City
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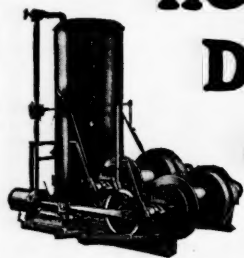
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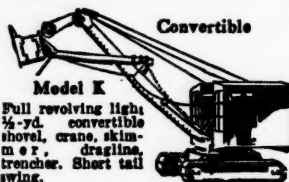
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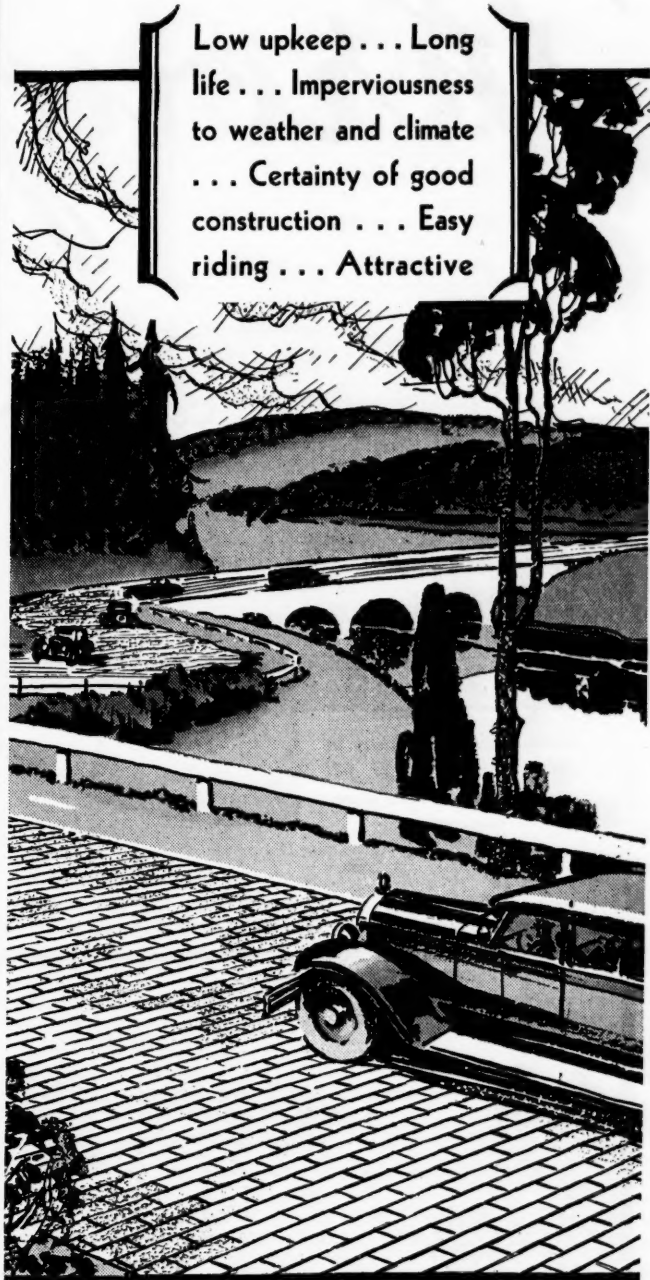
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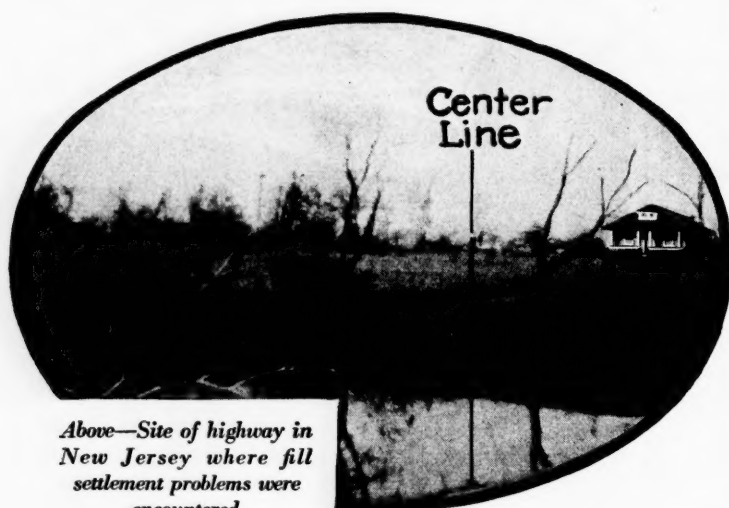
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Through muck



Above—Site of highway in New Jersey where fill settlement problems were encountered

DYNAMITE'S **job is displacing soft** **way Fills to make**

DYNAMITE has found a new job. Today, on thousands of miles of highways, it is helping to simplify one of the most difficult tasks highway construction engineers have to encounter—building roads across swamps and marshes.

Unless the full degree of settlement is attained through the underlying strata of peat or muck, road surfaces soon become uneven, attended by displacement of pavement. This results in exorbitant maintenance costs and makes the road unsafe for travel.

Blasting the unstable underlying material with explosives proves successful in accelerating the settlement of the fill so as to secure permanent roadways. Dynamite dislodges the mud, peat or other material efficiently and quickly. The methods of using dynamite are variable and can be applied in almost any locality. Here are three methods that have been successfully used:

- 1.** The first method is to blast with du Pont Ditching Dynamite as large a ditch as possible along the center line of the projected highway. Such a ditch may be thirty feet wide and eight feet deep. The



Above—Section of highway after dynamiting settled the fill

Right—Same as section above but with pavement completed and subjected to heavy traffic for a period of one year with no appreciable settlement



E. I. DU PONT DE NEMOURS & COMPANY, INC.

to hard bottom

new and successful material below High- permanent roads...

fill is then put in the ditch and piled up in sufficient quantity as to cause a considerable natural settlement, due to its weight, through the remaining unstable material. Blasting a ditch has two functions, first to throw out as much material as possible and second to liquefy or stir up the remaining material so that it can be readily pushed aside by the weight of the fill.

2. The second method is to place the required fill on the top of the marsh and load the dynamite in the mud or muck beneath the fill. Because of the water content of the underlying material, du Pont 60% Gelatin is recommended for this work. The force of the explosion pushes the muck aside and the fill settles in place. Here again the dynamite has two functions, first to create a cavity for the fill to drop into, and second to semi-liquefy the remaining muck.
3. The third method is to use du Pont Ditching Dynamite to shoot ditches on either side of the new fill after it has been put in place, in order to relieve the pressure so that the weight of the fill can more easily push out the underlying mud. When the muck is deep, the ditches are not sufficient and extra loads of du Pont Ditching Dynamite are placed in the ditch line at a depth below the bottom of the fill, so that the resulting explosion will force the remaining material out on either side of the fill. This method particularly applies when the fill material is clay and, therefore, will not flow readily.

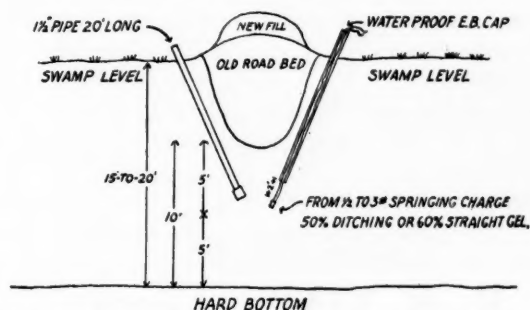
These three methods may be combined or suitably varied to meet any local condition or problem.

Our explosives engineers are observing and reporting on fill settlement projects in many sections of the country. Their findings are available to engineers, contractors and officials engaged in constructing and maintaining highways. Your inquiries and problems are invited in the interest of better highways, lower maintenance costs and public satisfaction.

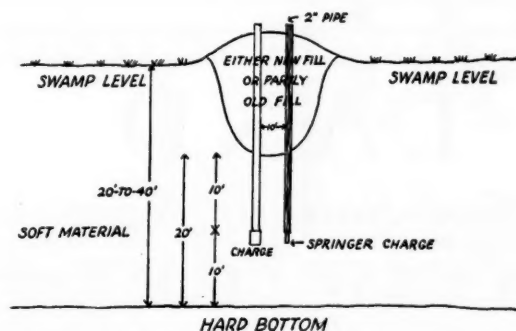


Explosives Department • Wilmington, Del.

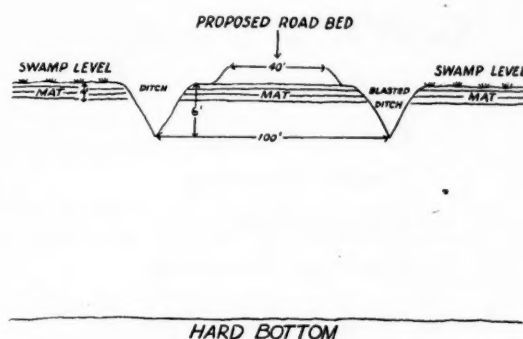
Some methods of loading for Fill Settlement blasts in the Lake States Area



1. Simplest in swamp not over twenty feet deep where conditions will furnish a twenty-foot length of pipe to be forced or driven by hand. Requires no other equipment than hammers, pipe-cutter and other small hand tools.



2. The method used in swamps deeper than twenty feet. Requires power-driving equipment.



3. For new work, the idea being to cut the mat and relieve side pressure to give fill better chance to settle, and settle straight. Next step is to blast underneath fill after fill has ceased to settle.

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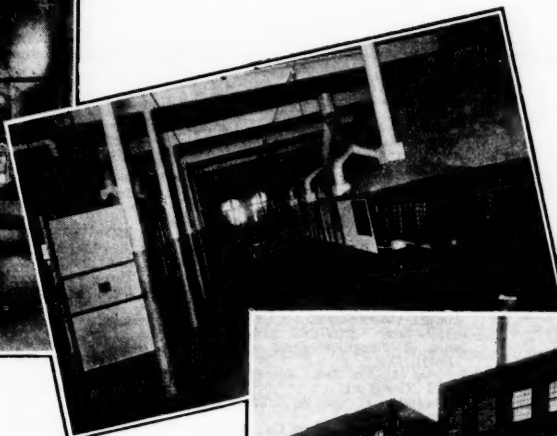
We have facilities for producing catalogs and all kinds of business literature in our large printing plant.

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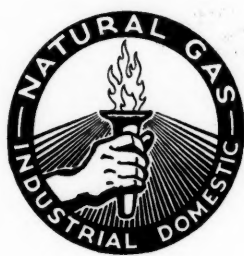
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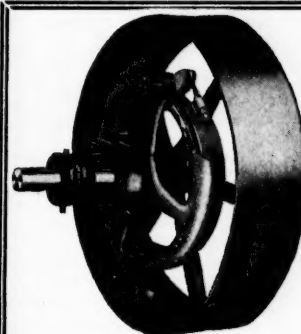
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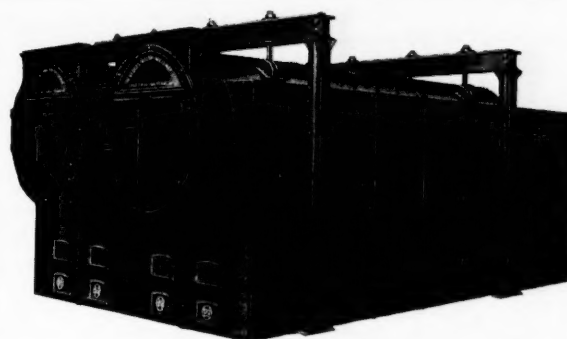
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Wiley & Wilson, Lynchburg, Va.

—(Hydraulic.)

Alpaugh & Sons, Chas. W., Manassas, Va.
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Engineering Service Corp., Houston, Tex.

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Main, Inc., Chas. T., Boston, Mass.
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 Whitman, Requaardt & Smith, Balto., Md.
 Wiley & Wilson, Lynchburg, Va.

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 McCrary Co., The, J. B., Atlanta, Ga.
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 Wiedeman and Singleton, Inc., Atlanta.
 Wiley & Wilson, Lynchburg, Va.

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 White Co., Gilbert C., Durham, N. C.
 White Engineering Corp., J. G., New York.
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 Hills and Youngberg, Jacksonville, Fla.
 Huey, S. E., Monroe, La.
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 Turner, C. A. P., Minneapolis, Minn.
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 Whitman, Requaardt & Smith, Balto., Md.

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 Sirline & Co., J. E., Greenville, S. C.

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—(Water Supply.)

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Thew Shovel Co., The, Lorain, Ohio.

EXCAVATORS (Clamshell and Orange Peel.)

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Ohio Power Shovel Co., Lima, Ohio.

Thew Shovel Co., Lorain, Ohio.

—(Dragline. See Dragline Excavators.)

—(Trench.)

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Bucyrus-Erie Co., So. Milwaukee, Wis.

Ohio Power Shovel Co., Lima, Ohio.

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Gulf States Steel Co., Birmingham, Ala.

Robertson Steel & Iron Co., W. F., Cincinnati, O.

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American Steel and Wire Co., Balto., Md.

Cyclone Fence Co., Waukegan, Ill.

Gulf States Steel Co., Birmingham, Ala.

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Congoleum-Nairn Inc., Kearny, N. J.

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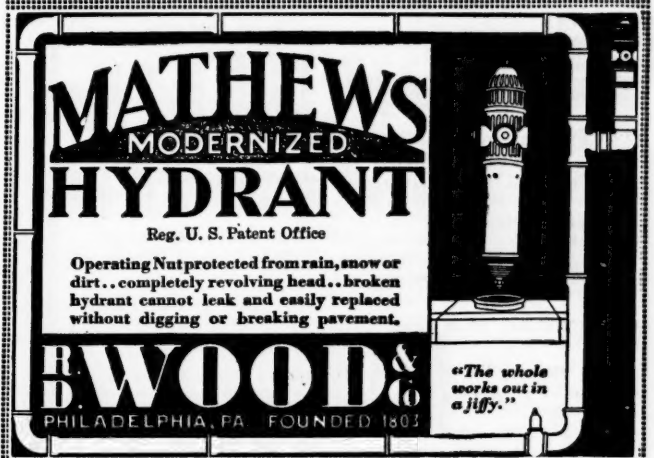
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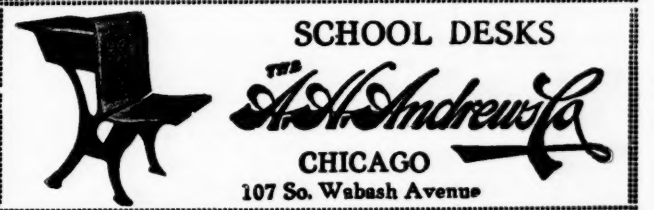
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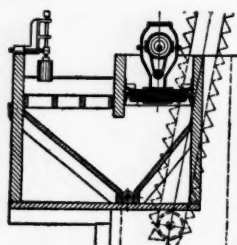
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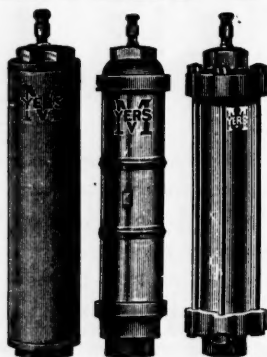
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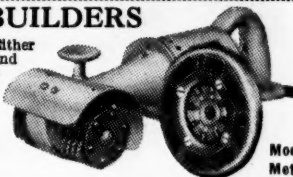
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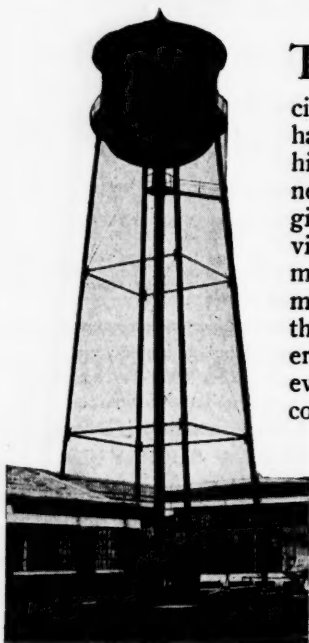
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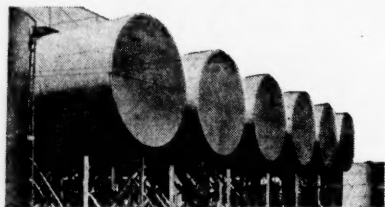
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TRUCKS (Industrial.)

Atlas Car & Mfg. Co., The, Cleveland, O.

—(Motor.)

International Harvester Co., of America, Inc., Chicago, Ill.

—(Platform, Freight, Mill, Factory, etc.)

Clark Tractor Co., Battle Creek, Mich.

TUBES (Boiler.) See Boiler
Tubes.**TUBING (Seamless Steel.)**

National Tube Co., Pittsburgh, Pa.
Timken Rolling Bearing Co., Canton, O.

TURBINES (Hydraulic.)

Newport News Shipbuilding & Dry Dock Co., Newport News, Va.
Smith Co., S. Morgan, York, Pa.

—(Steam.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
DeLaval Steam Turbine Co., Trenton, N.J.
General Electric Co., Schenectady, N. Y.

TURNBUCKLES.

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

TURNABLES.

American Bridge Co., New York, N. Y.
Virginia Bridge & Iron Co., Roanoke, Va.

—(Portable for Motor Trucks.)
Blaw-Knox Co., Pittsburgh, Pa.

UNIONS.

Dart Mfg. Co., E. M., Providence, R. I.

VALVES.

Ludlow Valve Mfg. Co., The, Troy, N. Y.
Lunkenheimer Co., The, Cincinnati, Ohio.
Merco Nordstrom Valve Co., San Francisco, Cal.
Mueller Co., Decatur, Ill.
Newport News Shipbuilding & Dry Dock Co., Newport News, Va.
Westinghouse Traction Brake Co., Wilmerding, Pa.

—(Acid Proof.)

Lunkenheimer Co., The, Cincinnati, Ohio.

—(Gate.)

Ludlow Valve Mfg. Co., The, Troy, N. Y.
Lunkenheimer Co., The, Cincinnati, Ohio.
Wood & Co., R. D., Philadelphia, Pa.

VAULTS (Bank and Safe Deposit.)

York Safe & Lock Co., York, Penna.

VENTILATORS (Roof.)

Merchant & Evans Co., Philadelphia, Pa.

WARDROBES (Hygienic, School.)

Wilson Corp., The J. G., New York.

WATER HEATERS.

Finnigan Co., Inc., J. J., Atlanta, Ga.

WATERPROOFING (For Brick, Concrete, Granite.)

Sonneborn, Sons, Inc., L., New York.

WATER Purification.

Bacharach & Co., E. W., Kansas City, Mo.
International Filter Co., Chicago, Ill.
Roberts Filter Mfg. Co., Darby (Phila.), Pa.

—Softening Apparatus (Purifying.)

American Water Softener Co., Phila., Pa.
International Filter Co., Chicago, Ill.

—Works Supplies and Appliances.

Amer. Cast Iron Pipe Co., Birmingham.
Cast Iron Pipe Research Assn., Chicago.
Glamorgan Pipe & Fdry. Co., Lynchburg, Va.
Leadite Co., Philadelphia, Pa.
Mueller Co., Decatur, Ill.
U. S. Pipe & Foundry Co., Burlington, N. J.
Wood & Co., R. D., Philadelphia, Pa.

WELDING.

Charleston Dry Dock & Machine Co., Charleston, S. C.
Hedges-Walsh-Weldner Co., Chattanooga, Tenn.
Newport News Shipbuilding & Dry Dock Co., Newport News, Va.
United Welding Co., Middletown, O.

WELDING APPARATUS (Electric Arc.)

General Electric Co., Schenectady, N. Y.

WELL CONTRACTORS (Oil, Artesian, etc.)

Petersburg Mchry. Pump & Well Co., Petersburg, Va.
Virginia Machy. & Well Co., Richmond, Va.

WHEELS AND AXLES.

Carnegie Steel Co., Pittsburgh, Pa.

WINDOWS (Bronze Casement.)

Michaels Art Bronze Co., Covington, Ky.

WIRE (All Kinds.)

American Steel & Wire Co., Chicago.
Jones & Laughlin Steel Corp., Pittsburgh, Pa.
Ryerson & Son, Inc., Jos. T., St. Louis and New York.
Seneca Wire & Mfg. Co., Fostoria, O.

—(Barbed Wire, etc.)

American Steel & Wire Co., Balto., Md.
Gulf States Steel Co., Birmingham, Ala.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

—(Fence.)

Cyclone Fence Co., Waukegan, Ill.
Robertson Steel & Iron Co., W. F., Cincinnati, O.
Stewart Iron Works Co., Cincinnati, O.

—(Flat and Round.)

American Steel & Wire Co., Balto., Md.
Roebbing's Sons Co., John A., Trenton, N. J.

—(Galvanized and Annealed.)

Gulf States Steel Co., Birmingham, Ala.
Seneca Wire & Mfg. Co., Fostoria, O.

—(Cloth (Iron, Steel, Copper, Brass, etc.)

Harrington & King Perf. Co., Chicago.
Roebbing's Sons Co., John A., Trenton, N. J.

—Goods.

Cyclone Fence Co., Waukegan, Ill.

—Rope (Transmission, Hoisting, Haulage.)

American Steel & Wire Co., Chicago, Ill.
Roebbing's Sons Co., John A., Trenton, N. J.

—Rope Clips.

American Steel & Wire Co., Balto., Md.

—Stapling.

Seneca Wire & Mfg. Co., Fostoria, O.

—(Telephone and Telegraph.)

American Steel & Wire Co., Balto., Md.

—(Welding.)

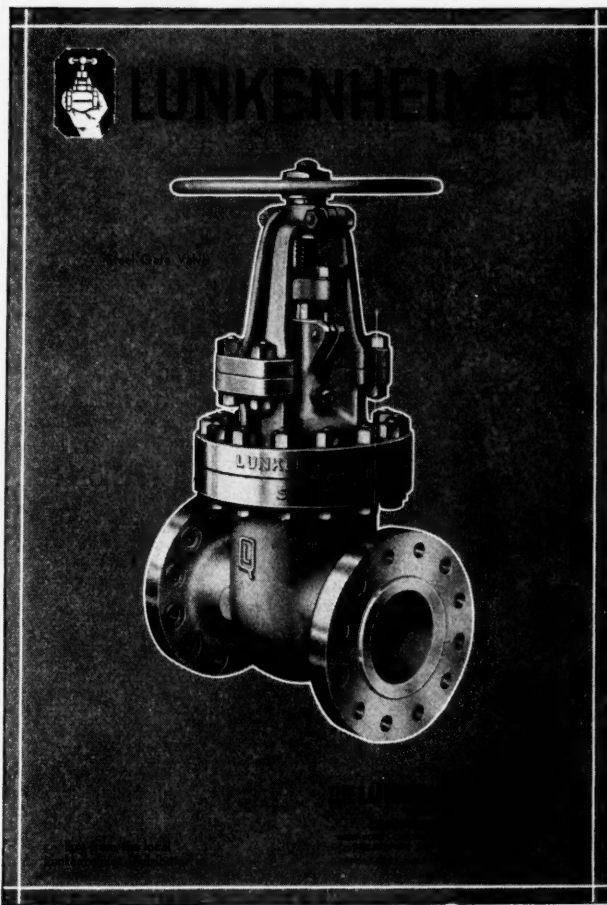
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—Zinc Chloride.

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